S. Hrg. 101-331, Pt. 3

# CLEAN AIR ACT AMENDMENTS OF 1989

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## HEARINGS

BEFORE THE

SUBCOMMITTEE ON
ENVIRONMENTAL PROTECTION

OF THE

COMMITTEE ON
ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE

ONE HUNDRED FIRST CONGRESS

FIRST SESSION

ON

## S. 1630

A BILL TO AMEND THE CLEAN AIR ACT TO PROVIDE FOR ATTAINMENT AND MAINTENANCE OF HEALTH PROTECTIVE NATIONAL AMBIENT AIR QUALITY STANDARDS, AND FOR OTHER PURPOSES

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SEPTEMBER 27, 1989

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PART 3

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# CONTENTS

## OPENING STATEMENTS

Page
Baucus, Hon. Max, U.S. Senator from the State of Montana ........ 1
Lautenberg, Hon. Frank R., U.S. Senator from the State of New Jersey ........ 47
Liberman, Hon. Joseph I., U.S. Senator from the State of Connecticut ........ 52

## WITNESSES

Alter, Harvey, U.S. Chamber of Commerce ........ 66
    Written statement ........ 308
Ayres, Richard E., senior attorney, Natural Resources Defense Council ........ 60
    Written statement ........ 299
    Additional material supplied for the record ........ 512
Bangerter, Hon. Norman H., Governor, State of Utah ........ 1
    Written statement ........ 80
Bruckman, Leonard, director, planning standards, Bureau of Air Management, Connecticut Department of Environmental Protection ........ 44
Chiles, W. Bruce, president, Chiles Oil Co., and president, Petroleum Marketers Association of America ........ 67
    Written statement ........ 323
Cranston, Hon. Alan, U.S. Senator from the State of California ........ 9
Dougherty, Hon. Patrick, Missouri State Representative, on behalf of the National Conference of State Legislatures ........ 28
    Written statement ........ 116
Engel, Ralph, president, Chemical Specialities Manufacturers Association ........ 71
    Written statement ........ 345
Feldcamp, Larry, chairman, Texas Ozone Task Force ........ 69
    Written statement ........ 338
Franke, Randall, county commissioner, Marion County, OR, on behalf of the National Association of Counties ........ 30
    Written statement ........ 124
Kunin, Hon. Madeleine M., Governor, State of Vermont ........ 19
    Written statement ........ 96
McMahon, Anthony J., acting director, Division of Environmental Quality, New Jersey Department of Environmental Protection ........ 41
    Written statement ........ 172
Pena, Hoh. Frederico, mayor, Denver, CO ........ 32
    Written statement ........ 136
Smith, Dwane H., senior vice president of manufacturing, Arco Products Co ........ 58
    Written statement ........ 241
    Responses to additional questions from Senator Lieberman ........ 287
Theiler, Donald F., director, Wisconsin Bureau of Air Management ........ 39
    Written statement ........ 149
Wallace, William, chairman, board of directors, Santa Barbara County Air Pollution Control District ........ 42
    Written statement ........ 194
Wedda, Hon. Henry W., mayor, Yorba Linda, CA, vice chairman of the board, South Coast Air Quality Management Project ........ 47
    Written statement ........ 213
Wilson, Hon. Pete, U.S. Senator from the State of California ........ 12
Wirth, Hon. Timothy, U.S. Senator from the State of Colorado ........ 25
    Written statement ........ 110
Additional material: S. 1630 ........ 355

# CLEAN AIR ACT AMENDMENTS OF 1989 STATIONARY SOURCES

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WEDNESDAY, SEPTEMBER 27, 1989

U.S. Senate,
Committee on Environment and Public Works,
Subcommittee on Environmental Protection,
*Washington, DC.*

The subcommittee met, pursuant to recess, at 9:00 a.m., in room 216, Hart Senate Office Building, Hon. Max Baucus (chairman of the subcommittee) presiding.

Present: Senators Baucus, Chafee, Lautenberg, Warner, Graham, and Lieberman.

## OPENING STATEMENT OF HON. MAX BAUCUS, U.S. SENATOR FROM THE STATE OF MONTANA

Senator **Baucus**. Good morning. This hearing will come to order.

Today we continue a series of hearings on the Clean Air Act. Yesterday, Administrator Reilly testified, giving primarily the administration's point of view with respect to clean air, air toxics, acid rain, and nonattainment, that is, urban smog.

Today and tomorrow we will focus on nonattainment in particular. We have many witnesses this morning and this afternoon, as well as tomorrow. Some of the witnesses were scheduled early and are not here yet. However, we are honored to have the Honorable Governor Bangerter from the State of Utah here. As I said to the Governor just a few minutes ago, there is good reason why he happens to be the first witness to arrive on time. I think that's just good Western clean living, Governor. I'm glad you're here.

Let's begin the hearing. Governor, we are very happy to have you here. I know you have a very valuable contribution to make to clean air, certainly from the point of view of the Rocky Mountain States and thank you again for coming.

## STATEMENT OF HON. NORMAN H. BANGERTER, GOVERNOR, STATE OF UTAH, ACCOMPANIED BY KEN ALKEMA, DIRECTOR, DIVISION OF ENVIRONMENTAL HEALTH

Governor **Bangerter**. Thank you very much, Mr. Chairman. It is a pleasure to be here this morning. It is still 7 o'clock in Salt Lake City, or 7:20. I am pleased to have with me Ken Alkema, who is the Director of our Environmental Health Department and responsible for our clean air in the State of Utah.

I am pleased to have the opportunity to meet with you this morning to discuss the critical importance of amending and strengthening the Clean Air Act. As Governor of Utah, I have had to directly face the issues of environmental protection and enforcement. I have seen first-hand the need for a stronger, more effective and workable clean air statute. I say this even though Utah boasts some of the greatest and the cleanest air in the country.

A major attraction of the five national parks in Utah is that we can see spectacular vistas more than 150 miles away. Salt Lake City and other urbanized areas along the Wasatch Mountains frequently have a visibility of 50 miles or more. However, because of population growth and industrialization together with long winter inversions, even we are experiencing significant problems with air.

To fight this problem, I created the Governor's Clean Air Commission of State and community leaders. The Commission will develop a long-term clean air strategy for Utah involving all of our citizens. Utahans are firmly committed to taking necessary actions to protect the health of our citizens, to achieve clean air and guard our clean air resources.

The need for stronger Federal clean air legislation is compelling. One reason is the growing realization that air pollution problems are more complex, widespread and dangerous than previously thought. Stricter controls are needed not only to safeguard public health, but to deal with the mounting economic and environmental costs associated with ozone, carbon monoxide, particulate matter, air toxics, acid rain, and other hazardous air pollutants.

The States need leadership and action from the Federal Government to put these controls in place in an equal way across the country.

While it is true that past efforts have reduced air pollution, it is also true that we have not done enough. Acid rain continues unabated even as the damage mounts. Toxic air pollutants have not been identified and controlled, and 101 cities, counties and other areas, home to 150 million Americans, exceed the ozone limits considered necessary to protect public health.

This pollution also imposes hidden costs on our economy in ways we are just beginning to understand. Forest resources are under severe environmental stress due to ozone. Estimates of the combined value of ozone-related crop losses of wheat, corn, soybeans, and peanuts runs into billions of dollars nationwide. In Utah, pollution from urban areas hundreds of miles away is diminishing the grandeur of our national parks thus jeopardizing the priceless heritage these majestic lands provide.

The Governors, as a group, recognize that cleaning up the Nation's air will require a significant reduction in pollutants. To achieve these reductions, we are willing to do our part but Congress must assist our work through passage of a stronger and more comprehensive Clean Air Act.

The critical issues Congress must include in Clean Air reform must include urban air quality, motor vehicle controls, particulate matter, air toxics, interstate transport of air pollution, and elimination of acid rain. Your hearing today, Mr. Chairman, focuses on ozone and carbon monoxide and PM-10 reduction, and I will focus the balance of my remarks on the recommendation of the Governors with regard to these pollutants.

First, I will address tighter motor vehicle control requirements. This, we believe, is a critical issue for States since there is a direct tradeoff between the control of motor vehicle emissions and the control of stationary sources and industrial growth. In Utah, 80 percent of our ozone and 93 percent of our carbon monoxide problems are directly or indirectly related to our use of motor vehicles.

Maintenance of the standards in Utah will be impossible without the tightest vehicle emission limits. Moreover, we have learned that the cost per ton of pollution reduced through motor vehicle controls is significantly less than many available control measures on other sources.

While the National Governors' Association does not address specific numeric limits for motor vehicles, I believe that the United States ought to go at least as far as California's proposed program for the control of emissions from automobiles, trucks and buses. I believe Federal law should force the development of strong automotive control technology beyond the recently adopted California requirements, and support your efforts, Mr. Chairman, to do just that in the Second Phase of motor vehicle control.

Second, a reasonable deadline extension for areas that do not meet the Federal air quality standards. This deadline extension should be conditioned upon adoption of additional control measures designed to assure compliance with those standards by the new deadline. These schedules and controls need to be tough and workable, and I believe that S. 1630 addresses these issues.

Third, the Governors have called for legislation requiring EPA to issue control technology guidelines for the States to use in reducing emissions from currently uncontrolled hydrocarbon sources and for Federal controls to reduce emissions from consumer and commercial materials such as plants and solvents. We believe that S. 1630 also addresses these issues.

Finally, with regard to fine particulate matter, commonly referred to as PM-10, it is imperative that Clean Air Act revisions thoughtfully and effectively deal with this more recently regulated pollutant. In Utah and other parts of the West, PM-10 has become a more urgent and pressing issue than ozone or carbon monoxide.

This concern is based on the severity of the public health problems in some areas, the complexity of understanding the chemistry of PM-10 and its precursors, the fact that until the present time, we have not tried to regulate the sources that create PM-10, and the need to control not only industrial and mobile sources, but also area sources such as—we hate to say this—wood stoves which have to be looked at and street sweeping and other things that we do domestically.

Support for solving these critical PM-10 issues must be provided. Resource needs should not be overshadowed by the needs for ozone and carbon monoxide. Reasonable control measures must be required of all sources before extensions are considered. Schedules must be tight but they also must be workable. States should not be required to wait for EPA to move quickly, and develop guidance documents on technology and controls.

If these documents are to be useful to us, we need them within 18 months of enactment. S. 1630, again, contains these requirements.

Mr. Chairman, the Governors are pleased that Congress is making progress toward strengthening the Clean Air Act, and we look forward to working with you to secure its passage. Because much of the debate centers on technical issues, we have asked a politically and regionally balanced group of staff to develop more technically detailed guidelines for reauthorizing the law based on the National Governors' Association's Clean Air policy.

We in Utah have actively participated in this group, and endorse the guidelines this group has developed. While these guidelines do not yet represent official NGA policy, they have been provided to all Governors for review, and they have been found acceptable to most of us.

I ask that this statement be placed in the record, and again, I thank you, Mr. Chairman, for your leadership in this area. We look forward to working with you.

Senator BAUCUS. Thank you very much, Governor. That was an excellent statement, in small part, probably because of your assistant, my able former Montanan, Mr. Alkema. I recognize him as being formerly with the State of Montana Department of Health, as a matter of fact, and appreciate him.

Governor BANGERTER. Arizona tried to get him this year, too.

Senator BAUCUS. I notice in your statement you strongly favor a second round of tailpipe standards. Could you tell me why? Why do you think that is a good idea?

Governor BANGERTER. In Utah, that is one of the major problems we have, the emissions from automobiles. We believe they must be controlled, particularly in Salt Lake Valley because they are the major source of a good number of our problems. As you know, we get these inversions in the State, and when those things occur, particularly in our winter months, we have real trouble with that area, and the major effort we have really taken thus far in regulation, is to control those automobile emissions. I don't know if Ken wants to add to that.

Mr. ALKEMA. As the Governor's statement indicates, about 90 percent of all our problems with carbon dioxide or ozone are related to automobiles directly or indirectly, and if we don't have tighter standards in the future, there is no way that the Wasatch front in Utah can achieve the ozone and carbon monoxide standards, even if we eliminated all the industrial emissions of carbon monoxide and hydrocarbon. We won't maintain the standard in the future if we don't have more restrictive controls on tailpipe emissions.

Senator BAUCUS. Have you had the chance to look at cost estimates for Round II? That is far out in time, either the year 2000 or 2003, depending on what year they may be enacted, but some suggest—in fact, Administrator Reilly yesterday suggested that the cost, at year 2000, might be $500 per car. The others were much lower estimates.

I know this is not your life's work, delving into the cost estimates of Round II, but I am curious as to whether you have any sense of what the costs might be and second, would your opinion differ if the costs were as high as $500, although I don't think it is—but would you have a different opinion?

Governor **Bangerter**. I am not an expert, you have hit that right, on the costs of controlling tailpipe exhaust, but assuming that that's the case, I think we are at a point in time where we have to make those decisions—where our priorities are. It is a significant problem for us from time to time, and we are probably not in as difficult a position as some of the other major metropolitan areas.

I think we have to ask ourselves where our commitment is and what is important to us over the long term. We not only have to have better control, I think we have to do things in our mass transit areas in places like Salt Lake City and other areas to try and reduce not only the emissions coming from the vehicles but see if we can't do something to reduce the number of vehicles. That hasn't been a major challenge for us up to now, but it is starting to become a major challenge.

So I would say, basically, yes. Obviously, there can come a point where the costs may exceed the benefit, but with the documentation that appears to be coming on the problem with the ozone and other major potential climatic changes due to the pollution in the air, I think it is something we can't ignore any longer. We have got to deal with it. So I think we have to push forward as aggressively as we can. We always have to be ready to revise if that is necessary. But at this point, I don't think that ought to be the major issue.

Senator **Baucus**. You also made a point with respect to PM-10. You do, then, believe that the Clean Air Act legislation should require control technology guidelines with regard to PM-10, is that correct?

Governor **Bangerter**. We think that has to occur. Ken can elaborate on that a little more for us, but we have some fairly significant problems, particularly in Utah County, I think, on PM-10, and we've got to address that, not just from an industry standpoint, but from the individual citizen, if you want to elaborate on that.

Mr. **Alkema**. Yes. I appreciate that, Governor. I think it is important that the guidelines be developed, but I think one of the concerns that we also try to express is that we don't to have to wait for EPA to do those in all cases. While we would like to see a lot of pressure to make sure they come out quickly, if they are required, we are prepared to move forward, even without the guidelines, to require reasonable available control measures and technology. So we want them, but we also don't want to have to wait for them.

Senator **Baucus**. Is the State of Utah proceeding regardless, at this point?

Mr. **Alkema**. Yes, we are.

Senator **Baucus**. And is there a certain date by which you have the attainment guidelines in effect?

Governor **Bangerter**. We have a Clean Air Commission that is meeting on a regular basis. Also, in each of the major Wasatch front counties, they have organized their own committees that are bringing us recommendations. I think it is safe to say that it is our intention, although we have not yet established those guidelines, that in the next six months or so, this Commission will come up with the timetables and the schedules that we think will be reasonable and rational for us to meet. So I would say, yes, we are working toward that end.

Senator **Baucus**. Does that include regulation of wood stoves?

Governor **Bangerter**. I think you could say that is in the discussion stage. The Utah County group came up with a discussion of wood stoves. There is a lot of ground to cover before you put wood stoves into the formula. But it appears to us that if you take some of our metropolitan areas, where we can't bring industry emissions down sufficiently enough to solve the problem alone, then we are going to have to have the cooperation of individual homeowners at certain periods of inversion, to meet the kind of targets that we are looking at.

Wood stoves can be handled. There are ways to handle them. We are not saying that is going to be a part of it yet. We think it has to be part of the dialog. But you can't push the whole problem on one sector. Everybody has to look at this thing from an individual point as well as collectively, if we are going to come to a rational standard and maintain it.

Senator **Baucus**. I appreciate that. Wood stoves, as Mr. Alkema knows, are also a problem in my State of Montana, particularly in the community of Missoula.

What Federal support would the Governors like with respect to PM-10? States will proceed, but what Federal level of involvement do you think would be appropriate?

Governor **Bangerter**. I am going to let Ken answer most of that, but I would say the one thing that we need to have is some kind of equity, because we tend to impact one another. States are not isolated in the clean air situation. We move air from one State to another, and I think we want to make sure that there are standards and that everybody is moving toward a common objective.

Governors are not traditionally in favor of a lot of Federal guidelines coming to us. In many cases we would like to have those softened in many of our programs. But this is an area where there is impact from State to State, and if we are going to impact the overall problem, I think we have to address it from a national viewpoint, and an international viewpoint, in many areas.

Mr. **Alkema**. I would only add to that that it is really critical that any amendments to the Clean Air Act provide for tough schedules, reasonable schedules, but tough ones that hold everyone's feet to the fire on reasonable available control technology, and also that the time frames not be extended too far too easily.

I guess the only other area I would mention is in the area of research and development of modeling capabilities and determining in the precursor area, especially, how does this chemistry work in the atmosphere and how can you relate the sulfur dioxide emission or oxides of nitrogen emissions to fine particulates?

It is really very poorly understood and there is a need to make sure that we improve that. So, we recommend putting the dollars into the research that is necessary and providing the resources in PM-10. Ozone and carbon monoxide have been the sexier issues in the past and more of an eastern problem compared with the PM-10 in the West.

There is a real need to put that same kind of effort from a research standpoint, and technical assistance standpoint, into PM-10.

Senator **Baucus**. Do you find S. 1630 to be tough and reasonable, is it appropriate?

Mr. **Alkema**. Yes, we do, as we indicated in the testimony.

Senator **Baucus**. Thank you very much.

Senator Chafee.

Senator **Chafee**. Thank you, Mr. Chairman. I want to welcome Governor Bangerter here. I guess you are hustling off to Charlottesville rather quickly, aren't you?

Governor **Bangerter**. We are hustling to Charlottesville. We are going to solve all the education problems in the next 2 days.

Senator **Chafee**. Well, I am a great believer in the combined influence of the Governors in tackling this problem. Obviously, when we get into any of these problems, it is going to come down to you folks enforcing them, or enforcements that will affect you. For example, do you have inspection and maintenance now in your State?

Governor **Bangerter**. Yes, we do.

Senator **Chafee**. What do you think about Stage II, namely the intricate hoses that are required in the gasoline stations, where the hydrocarbons will be sucked back up into the underground storage tank? Do you have any of those out your way?

Governor **Bangerter**. I will defer to Ken on that, he can answer it better than I can.

Mr. **Alkema**. No, we have not installed any Stage II. We have Stage I in place. We are only a marginal area under the current bill that you are considering, so even under that we would not be required, as I understand it, to put on Stage II, even though we feel that it is a very cost-effective control technology and one that we will still consider as a marginal area if it ends up that way in the Clean Air Act, as a way of achieving the standard.

We would have preferred the on-board controls because it would be on people's——

Senator **Chafee**. Well, you mentioned that in the Governor's testimony. He talks about the on-board controls. I don't think they are mutually exclusive. In other words, Stage II reduces the hydrocarbons when filling up any automobile, no matter what the vintage is, whereas the on-board is only on the later models that come along.

My point is that these things are going to come back on the shoulders of the mayors and the Governors. You have 300 gasoline station owners rallying in front of your capitol saying that they object violently to the increased costs that are going to be imposed on them with Stage II or motorists with inspection and maintenance, so it is all right for us to pass laws up here, but you are going to be in the hot seat.

Governor **Bangerter**. I think the point we would make is that they have to be tough, they have to be reasonable, and they have to be attainable. I think to fit that balance is the difficulty we all face in making these kinds of decisions. Again, we have to make the decision as to what our priorities are, and whether we are willing to move toward that end in a reasonable, rational period of time.

So, we accept that fact. I guess you could say it wouldn't be the first time 300 people were on the steps of the capitol for some sort of thing. That seems to happen rather regularly in all of our States from time to time. But I think if we do it with good notification, we can deal with those things, as long as we can have the lead time, and as Ken has said, the technology to be able to accomplish those things, then I think we can work with those things and work with industry to solve them.

Senator **Chafee**. They are all going to be added costs to the consumer and to the supplier in the case of Stage II. I have a question about sanctions. This legislation has sanctions. If you don't meet the standards, then sanctions are going to be imposed. What do you think of those? I think the Chairman mentioned those before.

Governor **Bangerter**. One of the things governors don't like is sanctions, as you well know. However, again, I think that relates to what kind of lead time we have, to make sure that we are not whistling in the dark, that we are not setting out a standard that we can't achieve. I think we have to look at sanctions in two parts. One is, if we are given adequate lead time and it is achievable, and the technology is there, then I think we have to live with it.

But if we don't give that kind of time, and we don't have a reasonable chance of making it, I think we have to be very careful about sanctions because sanctions, while they take the money away, can also be counterproductive to a State, by pulling back money that you may use to accomplish it. I don't know that you can set that. I think you have to do the best job you can to set it going in, and then you have to always, in everything, be prepared to evaluate, if things don't come out exactly the way you plan them.

Senator **Chafee**. Let me ask you one quick final question, because I know you have to go. Every job we look at indicates that we're somewhat like on a treadmill here. We bring down the emissions of the automobiles, but there are more miles traveled by all automobiles and there are more automobiles all the time. So we come down in the emissions, but the total emissions into the atmosphere increase because of the two facts I mentioned. In your State, are they doing much to encourage van pooling, or to support bus lines from the State, urban bus lines? What can you do as you look at it to help in this struggle?

Governor **Bangerter**. Before I answer that, let me just comment on another thing that you didn't mention, with the increased miles, the motor fuel revenues continue to decline as a percentage of income, as well, with more efficient automobiles. So we get caught with more lane miles traveled, technically more pollution, and yet less money coming into the coffers because of efficiencies in automobiles to deal with it. That is a very real challenge.

We are still a reasonably small State. However, we are very urbanized, if you look at our population center, 80 percent of our State is in maximum 100-mile corridors. So although we have a lot of wide open spaces, we have a dense, and fairly urban population.

We have not had the significant kinds of problems that major metropolitan areas have. However, we do have a pretty solid bus system now developed. We also are in the planning stages for a light rail system that is getting a lot of attention and a lot of pressure. We have not yet gone to things such as vanpools and special lanes, but those are things that are on the drawing table. I think we will be imposing them.

So we are trying to take those kinds of steps, as well. We are a true Western State, however, we love our automobiles. We love to drive them alone. Those things are going to change as time goes on. But you have correctly pinpointed what the challenges are. I'd also like to add that the revenue side of that thing is continuing to decline in relationship to the miles we travel, which further complicates the trouble. But again, we have to decide where the priorities are, and whether we are going to take steps in that direction.

But you are correct also—that probably something else will pop up that we will have to address as we address some of these other issues.

Senator **Chafee**. Can you use your gasoline tax revenues for other than road construction? Can you use it for high-speed rail?

Governor **Bangerter**. We have not done that. Right now our mass transit system is funded by a local option sales tax of a quarter cent. There is some discussion about upping that in order to finance the light rail system. Technically, we can—we try not to, because the more we can fund out of our highway fund, the highway system, the more it frees up our general fund money so we can put it in some of those other areas.

We, for a little while, were moving more of those transportation moneys to general funds. We have been moving that back in the last 2 or 3 years, to try and keep that fund aimed at the purpose for which it was collected.

Senator **Chafee**. Thank you very much, Governor. Thank you, Mr. Chairman.

Senator **Baucus**. Thank you.

Senator Warner.

Senator **Warner**. Thank you, Governor. I think it is important for us to realize that you do speak on behalf of the Governors, in calling for tailpipe standards at least as tough as California's including the second round, although the Governors as a group have not focused on the carbon dioxide standards. Do you personally believe that is something we should look into.

Governor **Bangerter**. We think it is something that has to be looked into, and again as I said, this has not become formal NGA policy, but it appears it is heading in that direction. It has been circulated widely with the Governors.

Senator **Warner**. Thank you, Governor.

Governor **Bangerter**. Thank you, Senator Warner.

Senator **Baucus**. Let me now ask the two California Senators, the California delegation, to come to the witness table. I am going to leave it to the two of you to see whose time constraint is the most stringent, most difficult. I have a note here that Senator Cranston has to leave between 9:30 and 9:45 and also that Senator Wilson has to leave. So I will let the two of you work it out.

## STATEMENT OF HON. ALAN CRANSTON, U.S. SENATOR FROM THE STATE OF CALIFORNIA

Senator **Cranston**. Senator Wilson has graciously permitted me to go first. I do have a hearing I am supposed to start at 10 o'clock. I thank you very much for the opportunity to be with you to testify regarding language included in S. 1630 which would extend the jurisdiction of the Clean Air Act over the outer continental shelf.

I want to commend you, Mr. Chairman, and the members of this Committee for your leadership on this very, very important issue.

As you know, California faces the most serious ozone pollution problems in the country. This is partly due to the unique geographic and meteorological conditions in California, as well as to the sheer number of people that live there. California also has the most stringent air quality standards in the Nation from stationary sources to mobile sources. In spite of all this, many areas in California still fail to meet Federal air quality standards.

I am here today to focus my remarks on one issue that has become extremely important to the success of many areas in California to achieving healthy air quality. I am speaking of language incorporated into S. 1630 that recognizes and addresses the problem of pollution transport from the outer continental shelf.

In California, due to the steepness of the ocean floor, OCS platforms are primarily located within 15 miles of the coastline. Air pollution, created by this oil and gas activity, is being blown onshore by the prevailing winds further contributing to what is often already an onshore air crisis. This is especially true since the great majority of OCS platforms are located offshore of nonattainment areas.

OCS facilities are a major source of air pollution. For example, a major uncontrolled offshore oil project can emit pollution which easily exceeds the amount associated with 100,000 automobiles, meeting 1988 California emission standards, each of them traveling an average of 10,000 miles a year. But these major pollution sources are not regulated under the Clean Air Act. Instead, they are regulated by the Department of the Interior.

As a result of this division in Federal jurisdiction, a huge disparity has been created. While local pollution districts have imposed strict control measures onshore, the Department of Interior has allowed OCS development to proceed with minimal air pollution controls.

As the situation stands today, local air pollution districts are required by the EPA to take into account OCS emissions in putting together their local air quality plans, even though they have no authority to control or regulate those emissions. As a result, they must turn to onshore sources to exact still further emission reductions in order to compensate for these OCS emissions.

But, we are very fast approaching a situation in California where the onshore reductions will simply not be there anymore. The next generation of control measures in many areas of California will be the toughest ever implemented anywhere in the country.

For example, in an effort to comply with the new Federal clean air legislation and meet Federal air quality standards, the South Coast Air Quality Management District has formulated an ambitious and very stringent plan to clean the air in the Los Angeles area. It calls for the conversion of vehicles to clean fuels and envisions the eventual use of electrical vehicles.

Among the various control measures included in the plan are a ban on certain lighter fluids for barbecues, a prohibition on gasoline powered lawn mowers, the elimination of free parking downtown. In short, it will require certain quite drastic lifestyle changes for Los Angeles area residents.

In light of these ongoing, onshore efforts to control pollution, and the significant contribution that OCS sources make to onshore problems, the current disparity between onshore and OCS controls simply cannot be overlooked any longer. If there is no change in current law, we could be facing a situation where many onshore areas would be hindered and/or possibly prevented from attaining Federal air quality standards, specifically because of emissions from OCS developments not under their control.

We need to be consistent to be effective. If EPA requires local agencies to control emissions from John Doe's lighter fluid that he uses on his backyard barbecue, do we want to allow the Department of the Interior to require minimal controls on major OCS platforms being constructed a few miles offshore that have a far larger impact?

We need one Federal agency regulating all air quality instead of dividing it between two Federal agencies based on some fictional wall lying 3 miles offshore. EPA is the agency with the expertise and the mandate to protect our air quality. EPA should have that jurisdiction over offshore air quality, also.

The language in S. 1630 would provide equitable treatment of onshore and OCS sources by requiring OCS pollution sources to meet the same air quality regulations as onshore sources. OCS facilities would be regulated no more, nor any less stringently than onshore sources. This would ensure that all facilities are developed equitably, and that OCS facilities carry their fair share burden for attainment of air quality standards.

If we are serious about clean air, and we must be, we must closely examine the policies we are implementing at the Federal level. If clean air legislation is enacted with language addressing this problem, much of the progress made toward clean air through tough onshore controls will be wiped out due to unregulated or poorly regulated offshore emissions.

By vesting authority in EPA to regulate all air quality, we assure a consistent approach, and finally put an end to the current inequities and move forward in a comprehensive manner to bring all areas around the country into attainment.

I thank you again for the opportunity to testify and I am delighted that Senator Pete Wilson, my friend and colleague, is here, sharing, I am sure, the same view of what really must be done on this front.

Senator BAUCUS. Thank you, Senator. Can you stay or do you have to leave right now?

Senator CRANSTON. I should leave, because I am supposed to start another hearing very quickly.

Senator BAUCUS. Could I ask just one very brief question? Some have suggested tighter OCS standards. That Federal legislation should regulate Outer Continental Shelf activity the same as it does onshore. Is that just a subterfuge to prevent offshore development?

Senator CRANSTON. Absolutely not. We need this for air quality purposes. We can deal with the offshore development in other ways.

Senator **Chafee**. A quick question. First, the figure you gave in your statement is an astonishing one, and certainly ought to carry the day for you, that a major offshore oil project can emit pollution that exceeds that of 100,000 automobiles traveling 10,000 miles a year.

Senator **Cranston**. Yes.

Senator **Chafee**. That sounds convincing to me.

Senator **Cranston**. Thank you. I think it is very convincing.

Senator **Chafee**. Is there any limit in mileage offshore that you would recommend—obviously, if somebody is 200 miles offshore, that is a different situation.

Senator **Cranston**. No. We are not proposing that. We are just proposing that EPA be the regulator on emissions.

Senator **Chafee**. And let them set up whatever distance offshore.

Senator **Cranston**. Not only what distance, but what amount of emissions are tolerated.

Senator **Chafee**. Thank you very much.

Senator **Wilson**. Senator Chafee, if I could, I would like to piggyback on that question. It's kind of academic for California. Unlike other States, we face a situation in which the rigs are very close to the shore.

Senator **Chafee**. What's the furthest offshore one might be? Twenty miles?

Senator **Wilson**. I don't think there are any 20 miles out.

Senator **Baucus**. The average mileage is what?

Senator **Cranston**. It's 15 miles, because the ocean just gets too steep.

Senator **Wilson**. We have a very sharply descending Continental Shelf.

Senator **Baucus**. An average is what?

Senator **Wilson**. I would guess an average is about 5 to 10.

Senator **Baucus**. OK, thank you, Senator, very much. We will let you go to your next engagement.

Senator Wilson.

## STATEMENT OF PETE WILSON, U.S. SENATOR FROM THE STATE OF CALIFORNIA

Senator **Wilson**. Thank you, Mr. Chairman. I am delighted to have the opportunity to appear before you today to discuss S. 1630 to reauthorize the Clean Air Act. It is a matter of critical importance to California, and to much of the rest of the Nation.

The greatest challenge that we face in California, after dealing with the twin problems of crime and drugs, is how we will continue to deal with growth, how we will manage the kind of growth that has been occurring relentlessly in California. We are now a mini-nation of 28 million people and growing. In fact, the projections are now that at some point before the year 2010 we will actually be 40 million.

California's growth is a mixed blessing. In addition to the advantages that it brings in terms of markets, skills, supplies of labor, the kind of booming economy that has ranked us as the sixth largest "nation" in the world, it obviously brings tremendous problems of congestion, of air quality, and that's why we are particularly grateful for the attention of the Subcommittee and the efforts to try to change a situation in which California, in all too many of its communities, is not only not in attainment, but far from it.

We are concerned with a number of specifics. tomorrow you will hear from Tom Cackette, the Deputy Executive Officer of the California Air Resources Board. He will present a number of suggestions, and requests for amendments to the Clean Air Act as proposed by the Administration, in order to permit California to regulate its own clean air problems in a more stringent fashion.

The State standards are tougher. They need to be. California has a much more severe air quality problem than the rest of the nation. Because of the size of its population, because of the vast number of automobiles, because of California's unique topographic conditions, we have some of the most acute air quality problems in the world.

Among the things that Mr. Cackette will tell you tomorrow is that the Act needs to be amended in order to permit California to regulate marine loading of volatile organic compounds. We need to amend the Act as proposed in order to mandate cooperation with the Department of Transportation to include car pooling and other alternative transportation devices, as part of an air pollution attainment plan.

We need to amend the act as proposed to mandate more stringent emissions standards for vehicles. Currently, 20 percent of the California vehicles on the road were originally sold outside California, therefore, one in five California cars older than 1975 do not meet California's more stringent new car standards.

It is a simple fact, Mr. Chairman, that it will take a while for California to meet its own standards, and we need to have the assurance that we will be permitted to do so, and not find ourselves in conflict with a preemptive Federal standard. We are, in the Los Angeles air basin, facing a situation where it is not anticipated that we could reach clean air standards in the next 15 years under the existing air management program. Inevitably, Southern Californians will have to adopt some fundamental lifestyle changes if we are to achieve a healthy clean air environment.

As my friend and colleague, Senator Cranston, has mentioned, lifestyle changes have been proposed that are fairly basic. When you have to tell someone that they can't barbecue in their backyard, when you have to tell a small dry cleaning establishment that in order to continue in business, they will have to buy an $80,000 piece of equipment, these are among the many changes which we would hope we can mitigate by dealing with more significant changes, which is why I do commend the President for giving emphasis to alternative fuels, because so much of our problem does derive from vehicle emissions.

Given appropriate legislative encouragement, clean fuel vehicles can shift from the demonstration fleets of today to the consumer showrooms of tomorrow. The kind of emphasis that has occurred already has led one of the major oil companies in California to develop a new kind of gasoline, which will deal with pre-catalytic converter engines. Recent report indicate that oil companies are now seeking to reformulate cleaner burning fuels for the later generation of vehicles.

We probably should be looking at performance, rather than specification standards, to encourage innovation of all kinds. But the progress that has been made to date is not enough, it has to be encouraged. In fact, it really has to be more than encouraged by the law.

So I thank the Committee, and urge you to continue to aggressively pursue the viability of alternative fuel requirements, and the alternatives to present gasolines of a kind that can be developed by different refining techniques.

Mr. Chairman, I am also delighted that you have taken leadership and I thank, as well, my friend the distinguished ranking member. It is obvious that you are serious about making changes in the law that can make a change in the air that we breathe. It is one of the most acute problems.

One of the most critical aspects is the one addressed by my colleague a moment ago. I am very pleased to say that we have enjoyed a very high degree of cooperation. Two years ago when I introduced S. 1381, he promptly cosponsored it, and he has, in his testimony this morning, given you the background for it. We are, in California, faced with a peculiar situation. Because of the steepness of our outer continental shelf, oil companies have been interested in leasing those nearest to shore, because it is a matter of economic good business to drill as close to shore as possible.

But this results in very little distance between those offshore rigs and the onshore pollution which is markedly degraded in a matter of hours when the unclean air over the rigs is blown ashore by prevailing winds, and further degrades coastal air quality already seriously in nonattainment. Unregulated offshore oil platforms have a considerable negative impact.

We have to deal with the fact that there are, in State waters, rigs which contribute markedly to the degradation of air quality and are subject to strong air quality standards. Yet rigs in federal waters are not. What we want to see is the same standard administered by a single agency, both offshore and onshore, both in state waters and federal waters.

Because of the less stringent standards offshore, the offshore air quality, very quickly, as a matter of the prevailing winds, becomes the ambient onshore air quality. This does result in the denial of permits for job producing industry ashore and that is a very serious problem, this is not a matter of environmental elitism or aesthetics, it is a matter of great concern to people who are seeking permits ashore and cannot obtain them, for the reason that they will be judged to contribute further to a serious air quality problem.

I might say that I think it is somewhat ironic that the oil companies have pled national security as an excuse to continue to operate under this less stringent standard administered by the Department of the Interior. Onshore firms, like McDonnell Douglas, which are far more directly and immediately engaged in the business of our national security, have to meet the more stringent standards administered by the Environmental Protection Agency.

That is why S. 1381, 2 years ago, was introduced, to require that both offshore and onshore, the air quality be administered under standards that are those of the Environmental Protection Agency.

Consistent regulation of onshore and offshore sources only makes sense, and it is only equitable. Last year, the then-Chairman, now the majority leader, Senator Mitchell, proposed reauthorization of the Clean Air Act, took S. 1381 and incorporated it into his proposal, for which I was grateful and very pleased.

I am very pleased that you, Mr. Chairman, have seen fit to incorporate essentially the principles and the concepts which motivated the introduction of S. 1381, and I think, if anything, your language is an improvement, so I extend my gratitude to you, as well.

Let me assure you that it is of the greatest importance, as a matter of clean air quality, standards affecting offshore drilling platforms, because otherwise we are in the ironic, and I think rather foolish, position of suffering in some cases almost draconian reforms ashore, and then, in addition, to see that effort frustrated by the fact that the air from the offshore rigs completely undoes, or at least undoes a greqat deal of the onshore air pollution regulation.

Senator Chafee expressed some wonder at the statistic that my colleague supplied. Within 90 days, the drilling of a rig located offshore can emit over 100 tons of nitrogen oxide emissions in a county which is already a nonattainment area for ozone. But it is because that drilling rig is located in Federal waters that there is nothing the county can do to regulate the emissions, even though they are blown ashore to aggravate that existing nonattainment situation.

A statistic that is often used is the Interior Department's—I stress the Interior Department's—calculation that the emissions from an exploratory rig equals those from 7,000 cars driven 50 miles. As bad as the existing situation appears to be, it promises only to grow worse, under the existing statutory provision.

So, production from new California OCS oil rigs that are already under construction is expected to quadruple by the mid-1990's. That is why this standard is of such great importance. The environmental impact statements have shown that unmitigated OCS platforms will push San Luis Obispo County into nonattainment for ozone. San Luis Obispo County is a rural county, removed from the stress and traffic of the Los Angeles region.

EPA already requires, quite realistically, that local air pollution districts take into account the added impact of offshore emissions in developing their onshore air quality management plans. What is totally unrealistic is that these local districts have no authority to regulate Federal OCS activities. They have to plan to accommodate it, but they can't do anything to correct it.

Ninety percent of California's oil production is onshore or within California's tideland waters. It is subject to onshore pollution regulation. But the onshore industry is forced to carry the burden of unmitigated OCS emissions.

It simply is not fair, and in a 1985 letter to the Interior Department, EPA stated that source control requirements were falling disproportionately on onshore sources, and said that "Onshore industrial growth may thus be precluded by the impacts of offshore development."

It has been argued by energy interests that this double standard, as I have indicated, should not be tolerated in the interest of national security.

Mr. Chairman, I think we have to reject that. If McDonnell Douglas in Orange County, onshore, can meet those standards, then certainly the oil industry should be required to do so as well.

The Department of the Interior itself has acknowledged these OCS emissions as a major source of air pollution. It has attempted to correct the problem of OCS air emissions five times in the last 10 years, through rulemaking. These attempts included over 2 years of negotiations. Each time the Department's rules have fallen woefully short of significantly mitigating the impact of OCS air emissions.

From April 1896 to December 1988 the OCS air question was reviewed by the negotiated rulemaking process, or what has come to be known as REGNEG. REGNEG was an outgrowth of a suit brought by the State of California against the Interior Department, alleging inadequate air quality control regulations.

The process involved representatives of Interior, Department of Energy, EPA, representatives of the State, oil industry, local air quality control districts, and environmental groups. Their goal was to reach a consensus on new Interior Department air quality regulations.

Mr. Chairman, the REGNEG process was inconclusive. No rule was proposed for which there was a consensus of support. In January of 1989, the Department of Interior announced yet another rule to control the OCS emissions problem. But the Environmental Protection Agency, the California Air Resources Board and local air pollution control districts have denounced Interior's failure to adequately address the air quality control issue.

It is clear that Federal law must be changed because the discrepancy between Interior's nonregulation or, I will say, its inadequate regulation of OCS emissions, and the regulation of other sources by other agencies, precludes remedying the problem through the Department's rulemaking. Certainly, every effort has been made and every opportunity given to allow the Department of the Interior to reach and to implement a successful standard that would avoid the necessity for what we are asking the Subcommittee to do.

Given the Department's record on the issue of clean air, it is much better public policy to transfer to EPA's regulatory jurisdiction OCS emissions instead of leaving it with the Interior Department. We must simply set a single standard.

Let me close by saying simply that it just doesn't make sense to treat a major air polluting emissions source in a nonattainment air basin any differently because it happens to be located in Federal waters, certainly not when it is located as near shore as are these platforms. Oil platforms located in State waters within 3 miles of the shore are covered by the Clean Air Act. Why should a platform located, as some are, 3.1 miles offshore in Federal waters, be regulated any differently? The answer is, there is no justifiable reason.

So let's dispense with the fiction that there exists some kind of invisible wall that separates OCS air from onshore air, and let's make the Clean Air Act whole with regard to all of the air in these coastal areas that are so clearly and dramatically impacted.

Mr. Chairman, you have been generous. I don't wish to take more time. I will conclude, as I began, by thanking you for your leadership and determination to bring about a change in the law to make a change in the air.

Senator BAUCUS. Thank you, Senator. As you well know, some offshore rigs in other parts of the country operate in topographies a bit different than that of California. Some are located further offshore in different parts of the country than they are offshore from California. Would you be opposed to a regulatory structure where EPA would regulate OCS rigs just as it does onshore rigs, especially in air emissions, but under a framework where some rigs a long way offshore, say a couple of hundred miles, 100 or 150 miles offshore, are subject to different standards, or should they all be subject to the same standards?

Senator WILSON. Mr. Chairman, I don't propose that the situation is the same for a rig 200 miles offshore as one 3.1 miles offshore. If the prevailing wind situation is different, obviously that has an enormous impact. In California, we have unhappily the worst of both factors, the prevailing winds, which can be quite pleasant, or they can turn out to be the bearer of very harmful tidings. We also have the very close proximity to shore of the platforms.

So it is a different situation, and what I would ask is that the standard be one that would require EPA to administer the same standard offshore as exists onshore for California, and for like situations. But if we are talking about a rig that is 200 miles offshore with a different situation as it relates to the prevailing winds, obviously there would be different requirements.

Senator BAUCUS. I want to get a chance to look at the Round II provisions of the bill that is before this Committee. Do you have any view on that?

Senator WILSON. I have not had an opportunity to really look at them closely. As I have indicated, we are, in California—I had to laugh when I listened to Governor Bangerter say that we are a western State in love with our automobile. I think he is accurately defining a passion of Americans generally, but perhaps one that is most acutely developed in those of us who are accustomed to driving long distances.

In California, there has been an increase in automobile pollution, which results in part from the increase in population, and in part because more people are buying more automobiles. One of the changes in lifestyle, I suspect, will be occasioned by public transportation systems which someday, but not at the present time, will provide an inviting alternative to a household of three which has three cars.

We have also found that people are driving further, that the number of trip miles is increasing. That is clearly true in coastal California, where we have people who are working in the coastal area, but who live, because of the prices of housing, much further inland. So there has been a tremendous increase in trip miles.

There has been only the offsetting fuel efficiency to try to compensate for that, but in effect, we have more people, we have more automobiles, we have more trip miles, so vehicle emissions are increasing.

**Senator BAUCUS.** And people are keeping their cars longer.

**Senator WILSON.** They are keeping the cars longer, that is true. Which is why I will single out a company for deserved praise. I think Arco deserves a great deal of praise, because they have focused on that particular problem. They have dealt with it by developing a gasoline that is specifically designed to meet the problem of automobiles which are precatalytic converter automobile engines.

**Senator BAUCUS.** I agree with you. I think gasoline is important. When you say pre-catalytic, that is the leaded gasoline. They are also offering it at a price that is not higher than other gasolines.

**Senator WILSON.** That is correct.

**Senator BAUCUS.** They are also offering the formula. I was in a Capital-to-Capital program on Moscow with Peter Jennings a couple of weeks ago, and an Arco representative volunteered to give the formula to the Soviet Union. It is quite interesting. But I agree with you. I think that is a major step forward. If the Soviets weren't interested, probably Arco's competitors are.

Senator Chafee.

**Senator CHAFEE.** Thank you, Mr. Chairman. I want to commend Senator Wilson for his presentation. Coming from what we might call the nation of California, where they have all these problems magnified, and of course, the reason that we have enacted this provision in this clean air bill was because of the interest you have shown over the many years in this particular problem. That is what got my attention. I can't speak for the Chairman, but certainly that is what attracted my attention to it.

You have been after this particular provision like a bulldog. You have introduced it, you have spoken to us, you made sure that we followed through with it, and I am enthusiastic for it, particularly following the presentation that you have made here. You have a terrible problem. Frankly, I had not realized that 3 miles versus 3-plus miles made the difference. I think everything you have said makes absolute sense, and we will do everything we can do to follow through with your recommendations. Thank you.

**Senator WILSON.** Thank you very much.

**Senator BAUCUS.** Thank you, Senator. I noticed that Senator Graham has just arrived, another able member of this Committee. If we can we'll just catch him a little off guard here.

Senator, do you have any questions of Senator Wilson?

**Senator GRAHAM.** Thank you, Mr. Chairman. I apologize that I was delayed. I did not have the benefit of hearing what the Senator said, but I know from previous experiences what his position is on this issue, which I share, and know that we work to see that adequate attention is given to the problem of air pollutants which have their origin in outer continental shelf activities.

**Senator WILSON.** Thank you very much, Senator Graham.

**Senator BAUCUS.** Thank you very much.

Next, we are honored to have the Honorable Madeleine M. Kunin, Governor of the State of Vermont. Governor, we are happy to have you here.

## STATEMENT OF HON. MADELEINE M. KUNIN, GOVERNOR, STATE OF VERMONT

Governor KUNIN. Thank you very much. It is a great pleasure to be here, Mr. Chairman and members of the Committee. I am very grateful for the opportunity to appear before you on what I think we all agree upon is one of the most important and urgent environmental issues facing the Nation today.

Senator CHAFEE. Governor Kunin, could I interrupt for just one moment, please?

Governor KUNIN. Certainly.

Senator CHAFEE. Senator Jeffords—I know you saw him earlier.

Governor KUNIN. Yes.

Senator CHAFEE. I just wanted to publicly state that he wanted to be here to hear your testimony but he is co-chairing a hearing on a subject he is deeply involved with. He wanted to extend his apologies to you personally for not being here. I just wanted to state that for the panel.

Governor KUNIN. Thank you very much, Senator. As I started to say, I think we all agree on the need to reauthorize a strong and effective Clean Air Act. As Governor of the State of Vermont, I represent not only my own State, but I also speak for the National Governors' Association in my capacity as the Chair of the Committee on Energy and Environment.

I think you realize, as well as we do, that our sense of urgency in the Clean Air Act is based not on fear, but on fact. Across the breadth of this country we see the signs of environmental distress, in fact, across the globe, from forest damage by acid rain in Vermont to brown clouds of smog in Los Angeles, as attested to by the two Senators you just heard.

There is evidence, as we know, that our polluting activities may even be disturbing the conditions for the preservation of life itself on this Earth. These are powerful facts. We know that air pollution in our cities is related to global climate change. So we have to reduce the pollutants at the source, and cannot simply transfer pollutants from one region of the country or the world to another.

What gives all of us encouragement, to me in particular, is that I am firmly convinced that Americans are ready to take tough steps to protect our fragile environment, even if it requires changing our behavior and giving up certain luxuries, such as the automobile, which was just referred to.

Vermont provides an interesting example of what the public is willing to do. We, in the last legislative session, adopted a landmark law banning the sale of automobiles equipped with air-conditioning units that use CFC's after the year 1993. We are going to be regulating air-conditioning maintenance almost immediately.

When that bill was first discussed, it was frankly considered kind of pie-in-the-sky, or idealistic thinking. Since then, we have known that it is actually technology forcing, and it is working. The automobile manufacturers are speeding up their schedule to comply with such laws.

The States and the citizens in these areas are willing to, in fact, be ahead of technology, and make it catch up to our demands. But Vermont is not unique, Mr. Chairman. The Governors of this

Nation, who represent a very diverse constituency—and I understand you heard from Governor Bangerter earlier, who is from a very different part of the country—we have really joined forces, both across the political spectrum, and one might say, the geographic spectrum.

We are in unanimous agreement of the need for strong measures to reverse the deterioration of our environment, specifically, the Governors have agreed on a firm plan of action to clean up the Nation's air.

I think the fact that we are as united as we are, I know Senator Graham, having been a Governor, is familiar with the traditional regional viewpoints the Governors have expressed and firmly adhere to until recently on a lot of environmental—particularly Clean Air—issues. I think until recently, they reflected some of the regional tensions that are seen in the Congress that have delayed action until now within the Congress. But I believe the consensus of the Governors may be an indicator of a new national consensus. It is our hope that that consensus will be reflected in the action of the Congress as well. Certainly the recent support of the President adds very great hope that that will in fact happen.

What have the Governors agreed upon? We agree that cleaning up the Nation's ozone and carbon monoxide problems will require significant reduction of pollutants in most of the Nation's urban areas. To achieve these reductions, the Governors call for a stronger and more comprehensive Clean Air Act. We are extremely pleased, Mr. Chairman, that you have developed this bill and made a commitment to securing final passage to this session.

Although as a matter of policy, the National Governors' Association does not endorse specific legislation, I would note that your bill, S. 1630, is consistent with the framework recommended by the Governors.

I applaud your efforts to develop tough, effective legislation. Let me point to a few specifics. First, the Governors have endorsed the concept of the reasonable deadline extensions for areas that violate the Federal air quality standards, conditioned upon the adoption of additional control measures designed to ensure compliance with the standards by the new deadline. The menu of additional control measures you have included in your bill seems appropriate.

Second, the Governors believe it is essential to tighten motor vehicle control requirements. This is a critical issue for us, because we understand very clearly that there is a direct tradeoff between the control of motor vehicle emissions and the control of stationary sources and industrial growth and jobs.

We have concluded that the cost per ton of pollution reduced through motor vehicle controls is significantly less than other available control measures. This is why we support the following parts of this legislation: One, more stringent emission standards; two, the extension of useful life and warranties for emission control components to 10 years, or 100,000 miles; three, the requirement for on-board vapor recovery controls; four, a stronger automobile test and certification procedure, including a cold start test at 20 degrees Fahrenheit; and five, lower gasoline volatility standards.

Although NGA policy does not address carbon dioxide emission standards for motor vehicles, such a new standard signals a good start in this country's response to the threat of global warming.

Third, we believe any successful bill must create specific emission control requirements to address the interstate transport of ozone. S. 1630 recognizes this problem and designates regional corridors with the authority to implement vehicle inspection and maintenance programs and to controls on stationary sources.

I also particularly want to reemphasize the Governors' recommendation that you develop an acid rain program, including a 10-million-ton reduction in sulfur dioxide emissions and a fair and equitable plan for financing those reductions. I think we all have concluded that the damage from acid rain is mounting steadily, and it is important that we take immediate and meaningful action.

Mr. Chairman, I have attached a copy of the NGA Clean Air Policy which has been approved by all the Governors and conveys our official views. Because much of the debate in this particular area also centers on technical issues, we have asked NGA staff representing a nationwide and bipartisan constituency, to develop more technically detailed guidelines regarding nonattainment, based on our policy guidance. These specific technical guidelines are also attached. While they do not represent official NGA policy, the guidelines have been provided to all the Governors for review, and found acceptable by most of them. I ask that this statement and those attachments be included in the record of this hearing.

Mr. Chairman, I want to thank you again for this opportunity to share our support with you for the Clean Air Act. It is interesting—these days when I ask schoolchildren who come to the State House to learn about government what they would do if they were Governor of Vermont, lately their answer has been very, very consistent. It is to save the environment. Do not pollute the air. Let us enjoy the beauty when we are grownup.

In our respective States, we are listening to those children. We are taking strong action. Just last week, I unveiled an ambitious environmental agenda for the State of Vermont, committing us to appropriate $350 million for the next 10 years, for infrastructure and for land conservation. But we know that we cannot do this alone. This is a national problem, and an international problem.

So the Clean Air Act is the most important single piece of environmental legislation that you can enact. It, more than any other initiative, will have a profound effect on the life of this planet. We look forward to continuing to work with you. We thank you for your leadership, and we urge you strongly on behalf of the children of Vermont, and the children all over this Nation, to enact the strongest law possible.

Thank you very much.

Senator BAUCUS. Thank you, Governor, for that very strong statement.

Why did the Northeast Governors decide to implement the new California standards? Air pollution certainly was one of the reasons. Was there another reason that it is much more cost-effective to reduce auto emissions compared with stationary sources? Is that one of the reasons the Northeast Governors decided to do this?

Governor Kunin. Absolutely. We did, with our environmental secretaries, an indepth study of what would be the consequences in the Northeast, and found that we could achieve significant emission reductions by adopting the new California standards.

For example, we expect to reduce hydrocarbons by 16 percent, carbon monoxide by 39 percent, and nitrogen oxides by 27 percent. Costed out, the conclusion was that these reductions would cost on the order of $600 per ton for motor vehicles, and the same reduction would cost $5,000 per ton from stationary sources. So that cost-effectiveness comparison of $600 to $5,000 is very persuasive.

Senator Baucus. Have the Governors had an opportunity to look at the concept of averaging that this Administration's bill contains? If so, what reaction did the Governors have with respect to averaging?

Governor Kunin. We have looked at averaging, and we do not support it in our policy. I think there is too much uncertainty as to what the results might be, and the fact that there might be a higher level of pollution with averaging than without it.

Senator Baucus. So as I hear you—you speak for the Governors as well as Governor Bangerter—you are saying, go as far as you can reasonably go. That is basically what you are saying.

Governor Kunin. Absolutely. I think that this is really a new day on this issue. Even governors who know that their States will have to change lifestyles, will have to make new investments, will have to go through a major transition in some respects, are saying they should enact a stronger Clean Air Act. I think the overall concern is so great and the need for action is perceived by their citizens.

Senator Baucus. As I hear you, you are saying that we should go as far as we can go, and to err on the margin that we are perhaps going to far, or at least just to push, keep pushing, push that envelope, be in technology forcing. Obviously we have to be reasonable about this, but just keep pushing as far as you possibly can, given the relative bounds of reason.

Governor Kunin. Certainly. We are reasonable people, all of us, and recognize that there will have to be some costs and some cost shifting. I think we recognize that the cost of inaction is enormous. That sort of prompts unanimity, and I cannot overemphasize the amazing achievement that the Governors are so firmly united on this issue.

A few years ago, if you brought the question of acid rain to the table before the Governor, there was a kind of tension in the air, because nobody wanted to offend anybody else. If the NGA went too far, in an acid rain policy statement, the Western and Midwestern Governors would strongly object. Today, you don't hear those objections. There is unanimity on the need for action for such questions as acid rain.

Senator Baucus. Including a 10-million-ton reduction by the year 2000, a real 10-million-ton reduction.

Governor Kunin. Yes, absolutely.

Senator Baucus. So you can speak for all Governors in making that statement, is that correct?

Governor Kunin. That is correct.

Senator Baucus. Mr. Chafee.

Senator **Chafee**. Thank you, Mr. Chairman.

Governor, I am delighted to see you again.

You mentioned that you have just come forward with, I think you said a $450 million program, over 10 years?

Governor **Kunin**. Yes.

Senator **Chafee**. Which is a lot of money for a small State. I presume that involves open space purchases?

Governor **Kunin**. Yes. We have something called a housing and conservation fund, and some of it will go to that and some of it for infrastructure, some of it for sewage, for clean water, and for landfills.

Senator **Chafee**. If you could send me a copy of your statement on that, I would appreciate it. That would be interesting.

Governor **Kunin**. I just happen to have a copy here.

Senator **Chafee**. I'll pick that up.

I am absolutely convinced we are going to see a decrease in the cost of those machines that are required to recapture CFCs from automobile air-conditioners when they want to drain out the refrigerant. I think each garage or wherever this takes place is going to see the cost of those machines come down.

I was also very pleased that you endorsed the limitation on $CO_2$, carbon dioxide emissions. That is extremely important in connection with the whole global warming problem that I think, as a nation, we should be a leader in solving. So I appreciate that.

In your statement you said that the Governors had not taken a position on that and that NGA policy does not address carbon dioxide emissions.

Governor **Kunin**. That's right. We support the concept. We have not formally taken a position on that.

Senator **Chafee**. Well, I can say the Government of Vermont is for it.

Governor **Kunin**. Yes, that's correct.

Senator **Chafee**. Well, thank you for your testimony, and again, I am sorry that Senator Jeffords could not be here for it.

Governor **Kunin**. I understand. Thank you very much, Senator.

Senator **Baucus**. Thank you very much.

Senator Graham.

Senator **Graham**. Thank you, Mr. Chairman. I want to express my appreciation and admiration for Governor Kunin. She has done an outstanding job representing her State and the National Governors' Association.

Governor, I would like to ask about three issues. One is the State implementation plan procedure. There has been some concern as to whether the plans have been consistent with the objectives of the existing Clean Air Act and there has been an adequate level of oversight, both at the State and the local level. Do you have any comments as to what your assessment of that process is in the current law, and any recommendations for modification?

Governor **Kunin**. I think it has been fairly uneven up until now. Sometimes it is interesting, in a State like Vermont, where we will be asked to adhere to the Clean Air Act for pollution that we have not generated, but that blows our way. We wish the EPA were more tough on the States that produce the emissions. But I think what has to be clear is that there is an overall national standard that everybody plays by the same rules, and that there is adequate staffing to enforce that fairly.

Senator GRAHAM. A question that has created some of those days of tension that you referred to in the NGA has been the question of cost sharing. To what extent should there be a reallocation of costs directed at those States which have the most cleanup to do from those that are relatively more in compliance? Has the NGA taken a position on that?

Governor KUNIN. Yes, we do believe in cost sharing. This is one area where our policy is different from the President's proposal. Because I think we are realistic, that somebody will have to pick up the tab at some point. I think the most direct way to do that is to figure out a system that is as fair as possible. Even the States that are the nonproducing States are willing to carry some of that burden. Obviously, they shouldn't carry the major cost. But NGA policy has consistently supported some cost sharing.

Senator GRAHAM. The President has an approach to cost sharing which utilizes the concept of the purchase of pollution credits. Do you have any comment as to that approach to the cost sharing?

Governor KUNIN. I think it is an interesting idea. I think it is certainly worth trying. The real question is, Will it be adequate? Will it go far enough, will it be effective enough? But I would not want to, and I don't think the NGA would, dismiss it out of hand. I think it is innovative, it is creative, and it may be effective. But I think at some point the NGA still understands that there is still going to be some costs. This still may not do the whole job.

Senator GRAHAM. A final issue that has caused some controversy among the States is the question should the Federal act be essentially a performance-based statute, that is, setting the standards and allowing substantial latitude in how to meet those standards, or conversely, whether it should be more prescriptive in terms of the processes which will be required in order to come into compliance? Does the NGA have a position on those two alternative approaches?

Governor KUNIN. In general, the NGA has been leaning more on the side of technological standards, being more prescriptive of what is expected. My own opinion is that if you have performance standards, you have to be able to measure those some way, too. If you could come up with a system that effectively does measure them and define those terms ahead of time, then that is worth looking at.

I don't think it can be so vague as to make it impossible to trace the sources, if the performance were not met. So possibly some combination of the two would work, but if one moves toward a performance standard, one really has to think that through, as to how it would actually work, and if it did not work, how one would fix it.

Senator GRAHAM. Thank you.

Governor KUNIN. Thank you.

Senator BAUCUS. Thank you, Senator.

Governor, two points. One is that in your opening statement you mentioned that I am committed to passage of the bill this session. I wish we could pass the bill this session. I am afraid, though, that passage of the Clean Air Act and signature by the President will probably not be this session of Congress, but with greater likelihood it will be in the next session of Congress. But definitely in this Congress.

Governor **Kunin**. Good. Well, I know you will do what you can. That's the equivalent of technology forcing.

Senator **Baucus**. That's a good point. That's a good analogy.

Second, you mentioned that there is some difference between the Governors on the President's bill with respect to cost sharing. We all know what a problem that has been, to try to reach some kind of resolution with respect to the acid rain portion of the Clean Air Act.

As you undoubtedly also know, the marketable permit system contained in the President's bill was also contained in the bill that Senator Mitchell and others and I will introduce this week. It contains this marketable permit system, which is a form of indirect cost sharing. That is with an emissions cap, and if there is a utility, for example, which reduces its emissions, it develops credits which it can then sell.

Therefore, it achieves, in an indirect way, most of the same results of a true and direct cost share. I hope, and it is my expectation, frankly, that that provision will basically meet the cost sharing worries that some parts of the country have.

Governor **Kunin**. Thank you for pointing that out.

Senator **Baucus**. Thank you very much, Governor.

Governor **Kunin**. Thank you, Mr. Chairman and members of the Committee. If we can provide any further information to you at all through the NGA we will be delighted to do so.

Senator **Baucus**. You have been very helpful, all of you, so far. We are very grateful for that help. Thank you.

Senator **Graham**. Governor, if I could just again express my appreciation for the Governor's many contributions and wish her well in the education summit which starts at the University of Virginia.

Senator **Baucus**. These former Governors up here have made that point several times. Thank you.

Senator Wirth, we are running out of time. I won't subject you to the five minute rule, Senator.

## STATEMENT OF HON. TIMOTHY WIRTH, U.S. SENATOR FROM THE STATE OF COLORADO

Senator **Wirth**. I understand. I will be below that 5 minutes, Mr. Chairman. Thank you very much. I am delighted to be here testifying on behalf of the people of the State of Colorado, and those of us in high altitude regions who have particular problems, as you know, with clean air.

I want to commend you and Senator Chafee on this excellent piece of legislation and would like to request that I be added as a sponsor of the legislation, if I might.

Senator **Baucus**. We would be honored.

Senator **Wirth**. Thank you very much. We have, as you know, particular high altitude problems. We have been working with your staff on areas of the legislation that I think can be strengthened. You have got a good cold start provision. We believe that item can be strengthened.

We very much appreciate the work you have done on the 100,000 mile useful life of emission control devices. That is a second item that is very, very important to us in the State of Colorado. Third, setting lower CO emissions for the year 2000 will be difficult, but I think we have to move to make sure that we are pushing technology as hard as we possibly can.

We can do well under this legislation by the mid-1990's, but then we are going to start degenerating again early in the 21st century unless we really do push technology. We will have a bump of doing very well in the Denver metropolitan area, and I think all high altitude cities, then with increased traffic, we will go back down again unless we push technology.

That is the thrust of what I wanted to say today. We are offering a series of amendments on behalf of high altitude areas. I hope that Senator Armstrong and I will have a package together for the Committee.

Thank you very much, Mr. Chairman. We really appreciate the excellent work that you and Senator Chafee and the other members of the Committee have done.

Senator BAUCUS. Thank you very much, Senator. One quick question. Do you have a view on second round tailpipe emissions? Have you looked at that yet, or had a chance to get a sense of it?

Senator WIRTH. I don't. But I will get back to you. I guarantee it.

Senator BAUCUS. Thank you very much.

Do any of the Senators have any questions?

Senator CHAFEE. I just want to first thank Senator Wirth for his continued interest in all these environmental matters. I was stunned when I read in your testimony that 30 million miles are driven in the Denver area every day.

Senator WIRTH. It's just unbelievable.

Senator CHAFEE. That just boggles my mind. I would never have guessed a statistic like that. There is a provision in here I know you will be interested in, and I want to call your attention to it. That is that we deal with carbon dioxide emissions for the first time. Of course, that is in there because of the global warming matter, which I know you are deeply concerned about.

As we go along we are going to need all the support we can get on these tailpipe emissions problems because we are being tough on the automobile industry, there is no question about it. It is our view that these standards can be met by the automobile industry and that it will be a tremendous leadership factor in other automobile producing countries throughout the globe. They will get into line in order to sell their automobiles in the United States, and hopefully continue those kind of restrictions in the sales they make in the European community, or wherever it is.

But we have a lot of challenges and problems, and we look forward to your input, and I am delighted that you have enlisted in this campaign.

Senator WIRTH. Senator Chafee, as a veteran of the House Commerce Committee, I know the battles with the auto industry are going to be set out for you. I went through that for 12 years in my previous incarnation. I am very familiar with that. As a final note, that 30 million miles driven makes it so imperative that we focus on tailpipe emissions, that we focus on the 100,000 miles, that we focus on the cold starts, and we have a provision which we are going to be suggesting to you about aromatics in diesel fuel, which we think is also very important.

Regarding the provisions that you have wisely put in there relating to light trucks, 40 percent of the automobiles purchased in the Denver metropolitan area now are either light trucks or vans that currently are not meeting the same standards as cars, because of the anomaly in the earlier law. You have corrected that in your bill. We must stick with that. Those miles driven are a killer for us, in both a figurative and a literal sense.

Senator CHAFEE. Thank you.

Senator WIRTH. Thank you very much.

Senator BAUCUS. Senator Graham.

Senator GRAHAM. Mr. Chairman, I was struck with the provision or the paragraph in the Senator's testimony in which he advocates major investments in rapid transit as a strategic way to deal with reducing the number of automobile miles driven. Could you give us a summary of what is occurring, particularly in the Denver area, in terms of rapid transit?

Senator WIRTH. We have been up and down for the last 15 years, Senator Graham, and I would not be honest with you if I said that it was great. We have had a very tough time keeping the regional transportation district alive and going. We are now embarked on the third or fourth major plan.

What we have been able to do is make a lot of bus lanes. We are developing that with the help of the Congress. We have made a major commitment on buses, but we have a long way to go in terms of developing the kind of real comprehensive mass transit program we need. If we don't do that by the early 21st century, we are going to be behind the curb all over again, and in the kind of gridlock that you see in L.A. I suspect you probably have that sort of thing in Florida.

Senator GRAHAM. We do. The Secretary of Transportation is now undertaking a major transportation study, with one of the goals being to integrate the various aspects of transportation, the highways, mass transit, rapid transit, airports, into a coherent national strategy. As one specific example of how that might operate, is there any impetus from the new airport that is being planned and soon to be under construction in Denver as a stimulus for expanded rapid transit?

Senator WIRTH. A lot of us have been arguing that that ought to be the case. We have had just a tough enough time getting the new airport through all the hurdles. I can tell you, you are familiar with any kind of a new public works project, this has been just the Perils of Pauline, the train bears down, she's tied to the tracks, we grab her off the tracks, we turn another corner, and there she is again. It has just been that we have not gotten to that point yet nearly as well as we should have, Senator Graham.

The provisions of the legislation—the Baucus-Chafee legislation—requiring local planning to look at the overall fabric of transportation and looking at long term 20 or 20-plus year adherence to clean air goals are very, very important, and I hope that some of those will help us to force the hand of more mass transit. We have not done nearly enough or as good a job as we should have. As a matter of fact, we have not been able to stay ahead of it nearly as well as we would like to. I wish I had a good answer to that, but I don't.

Senator BAUCUS. One question—on a national average, about 50 percent of urban smog is due to hydrocarbon emissions, I think in the nonattainment areas. About 90 percent of carbon monoxide is due to emissions. Let me state that differently.

Fifty percent of the urban smog problem is due to auto emissions, on a national average, about 60 percent. And about 90 percent of the carbon monoxide is due to auto emissions. In a State like Colorado, particularly in the Denver area, with—what did you say, 30 million?

Senator WIRTH. Thirty million miles traveled.

Senator BAUCUS. Thirty million miles traveled a day—would the urban smog problems be attributed to a higher proportion of auto emissions or not? Would you know? Off the top of my head I think it would be.

Senator WIRTH. Oh, absolutely. Our major problem, of course, is carbon monoxide. We also have the particulate problem, and we have the inversion problem, and you have a wind pattern problem and all of those can combine together to really sock us in. But greater than 50 percent—auto emissions account for more than 50 percent.

Senator BAUCUS. Oh, yes.

Senator WIRTH. Of hydrocarbons.

Senator BAUCUS. Do you think so? OK, thank you very much.

Senator WIRTH. Mr. Chairman, thank you very much. You have been very helpful, and I look forward to working with you.

Senator BAUCUS. Thank you. You bet. OK. Let's go on to the next panel. Mayor Federico Pena, the Mayor of Denver, who could probably answer some of these questions better than anyone, also the Honorable Patrick Dougherty, the State Representative from the State of Missouri, representing the National Conference of State Legislatures, as well as the Honorable Randall Franke, Commissioner, Marion County, Oregon, representing the National Association of Counties.

Representative Dougherty, why don't you begin?

## STATEMENT OF HON. PATRICK DOUGHERTY, MISSOURI STATE REPRESENTATIVE, ON BEHALF OF THE NATIONAL CONFERENCE OF STATE LEGISLATURES

Mr. DOUGHERTY. Thank you. Mr. Chairman, and members of the Committee, my name is Patrick Dougherty, and I am a member of the Missouri General Assembly, District 67 which is located in St. Louis. I am Chairman of the House Energy and Environment Committee in Missouri, and serve on the Environment Committee of the National Conference of State Legislatures.

I would like to thank you personally for the opportunity to appear on behalf of NCSL. As you know, our organization represents legislators and staffs of all the 50 States. We believe one of the most serious threats to the quality of life in the United States in terms of public health is the failure of many areas of the country to achieve the standards established under the Clean Air Act.

The States have struggled for 10 to 15 years to implement reasonable air pollution control programs, in order to comply with Federal requirements. Unfortunately, we don't seem to be getting very far.

Most of us recognize the standards are not just for scenic vistas, but for the protection of the public health. Despite the areas, we are not meeting air quality standards. That is evidenced by EPA's data for 1988, which shows over 90 areas exceed the national ozone standards, and approximately 60 are out of compliance for carbon monoxide.

Overall, NCSL supports a strong, sensible policy to help the Nation reach its air quality goals. We appreciate your leadership and the work in S. 1630, and it embodies many of the concepts that we would like to support. We support the establishment of new nonattainment deadlines, imposition of sanctions only when the State implementation plans are not submitted or fully implemented, imposition of controls based on the severity of the pollution problem itself, additional and tighter controls on mobile sources, regulation of interstate transport of pollutants, and classification of nonattainment areas.

Additionally, we would like to suggest the following items. We would like to suggest strengthening the existing automotive emissions standards, including development and implementation of strict diesel and heavy duty standards. We would like to require the attainment of standards at altitude and their enforcement during the vehicle's useful life. We would like to extend the useful life and warranty for motor vehicle emission control components. We recommend that there be no relaxation of Federal standards for automobile controls that would result from fleet averaging. We are not in favor of that.

We would like you to require lower gasoline volatility standards, to adopt on-board vapor recovery or Stage II controls. We would like you to strengthen the automobile test and certification procedure, including testing vehicles under actual driving conditions, and fuels that would help develop cold start tests at 20 degrees Fahrenheit.

We would like you to strengthen the CAFE standards, promote increased research and development in the use of alternative fuels, encourage the production of lower pollution vehicles as well as programs to reduce miles traveled, which could include mass transit, carpools, and so forth, and to require inspection and maintenance programs for all areas exceeding the National Ambient Air Quality Standard for ozone or carbon monoxide.

In relation to deadline standards, we are supportive of extensions as providing the opportunities for the States with areas in noncompliance to meet those standards. However, these extensions should only be for specified periods of time, based upon the severity of the problem. We do not see this as letting the States off the hook. As legislators, we are fully supportive of the purpose and intent of the Clean Air Act to protect the public health and we agree with that philosophy.

We want more stringent controls as a quid pro quo for any extensions. With this requirement, inequities would persist for areas that have already made significant efforts. In regard to sanctions, we believe sanctions should be closely tied to deadlines. Once again, there is a need to be fair to areas that have diligently tried to reach the goal, however, we recognize the need for sanctions for those areas that may act, quite frankly, less responsibly.

Our policy seeks to have sanctions imposed only when an area has failed to properly plan or implement or has failed to comply with the requirements. Sanctions should not be counterproductive in meeting environmental goals.

In regard to mobile sources, Mr. Chairman, NCSL believes that tighter tailpipe standards are necessary to control automotive emissions. We believe this is particularly important because, as you have just stated, mobile sources are a major cause for nonattainment of carbon monoxide and ozone precursors.

Stationary sources have already received some substantial regulation. We know that. While we are not suggesting that stationary sources cannot achieve more, we want a balanced approach. We believe that the emissions standards should be for the useful life of the automobiles. We believe, Mr. Chairman, as we have said, that maintenance and inspection programs should be for all areas that are in nonattainment.

We ask you to take a look and to support regulating the long-range interstate transport of pollutants.

In closing, Mr. Chairman, I would like to say that my area from St. Louis, MO—which, as you know, is bordered by the Missouri River and we do have Illinois right across there—we have already instituted Stage II vapor recovery and we are in the process right now of building a mass transit system that will cross both Illinois and into Missouri as part of our solution to some of the problems.

We would like to thank you sincerely for allowing NCSL the opportunity to testify. We appreciate your leadership.

Senator Baucus. Thank you very much, Mr. Dougherty.

I have another hearing I must go to. Senator Chafee very graciously has agreed to chair the Subcommittee's hearing. I want to thank you for coming, and also Mr. Franke, thank you for coming.

Senator Chafee. What I would like to do is to hear from Mr. Franke, and then ask a couple of questions of you both. Why don't you proceed, Mr. Franke?

## STATEMENT OF RANDALL FRANKE, COUNTY COMMISSIONER, MARION COUNTY, OREGON, ON BEHALF OF THE NATIONAL ASSOCIATION OF COUNTIES

Mr. Franke. Thank you, Senator Chafee, for the opportunity to testify on S. 1630, the bill to extend and significantly amend the Clean Air Act. My name is Randall Franke, and I am an elected County Commissioner from Marion County, Oregon, and the Chairman of the National Association of Counties Environment, Energy and Land Use Steering Committee.

It is of great concern to NACO that 597 counties and parishes in more than 100 metropolitan areas do not meet the national ambient air quality standards for ozone, carbon monoxide, and PM-10, despite the fact that many of these areas have made significant efforts to control emissions from both stationary and mobile sources.

These areas look to Congress for the enactment of a program that addresses the variable nature of the problem, and prescribes a range of appropriate solutions. We are pleased to see that S. 1630 provides for different levels of controls, based on the severity of the nonattainment problem, and that it does away with the purely punitive sanctions for nonattainment, replacing them with more stringent control requirements. Less air pollution being the goal, the strategy should emphasize the adoption of measures that will achieve this result, rather than punish the patient because the medicine did not work.

In drafting S. 1630, we think that you placed the appropriate emphasis on mobile sources of pollution. At our annual national conference this past July, our whole membership unanimously revised our policy to reflect our heightened concern about the role of motor vehicles as the dominant cause of air pollution in the country today.

Our newly enacted resolution on Clean Air Act deadlines calls for the strengthening of the motor vehicle control program by increasing tailpipe standards for hydrocarbons, carbon monoxide and nitrogen oxide emissions by developing cold start standards, by reducing running losses, and evaporative emissions, and by promoting increased use of alternative fuels.

In addition, we have revised our platform language to advocate improved inspection and maintenance programs, and to call for certification requirements based on real life driving conditions, covering the full useful life of the vehicles. A copy of our new policy is attached to my testimony, and I respectfully request that it be made a part of the record.

Senator Chafee, we appreciate the fact that you and the Chairman have listened to the Counties as we have expressed our concerns over the years, and incorporated many of them into S. 1630. We wish to highlight several specific provisions.

We agree with the approach of S. 1630 for phased deadline extensions conditioned on the adoption of specific control measures to assure continued progress toward attainment.

We are particularly pleased to see existing counterproductive nonattainment sanctions replaced with a positive requirement that those failing to attain are moved into the next higher nonattainment category and must do more than clean up the air. To the extent, however, that this will impose higher emission fees on stationary sources, that may not be the prime cause of nonattainment, we wish to call your attention to an element of unfairness in the bill.

We firmly support inclusion of an exemption for resource recovery plans from construction ban sanctions that might be imposed. Including these facilities in the construction ban only exacerbates another serious environmental problem, that of solid waste disposal, while not necessarily contributing to cleaner air.

As previously discussed, we support the provisions of S. 1630 which are designed to decrease automotive emissions by 50 percent by the year 2000. These include new tailpipe standards for all types of vehicles and programs to reduce evaporative emissions, running losses and requirements for enhanced motor vehicle inspection and maintenance.

We think that this approach is superior to that in S. 1490, the Administration's bill, which contains lower tailpipe standards, engine family averaging, and excessive reliance on alternative fuels.

While we agree with most of the mobile sources control provisions in S. 1630, we are concerned that the strong emphasis on transportation control measures does not make adequate allowances for the lack of transportation alternatives, particularly in many suburban areas where mass transportation is non-existent, and car pooling on a grand scale is unrealistic.

We support the provisions requiring the EPA to promulgate additional Federal measures on a specific schedule as opposed to the approach in S. 1490 which merely gives EPA the authority to develop these measures at its discretion.

We do question whether you have given the agency too much time to address the problem of consumer products emitting ozone precursors.

We agree with the general approach of S. 1630 regarding ozone transport regions, however, we suggest authority be given to the EPA Administrator to make exceptions for rural based sources within the area not contributing significantly to the ozone problem in that area.

Senator Chafee, all those involved in the development of S. 1630 have done a fine job. The National Association of Counties is pleased to express our support for many of its provisions. We look forward to working with you to ensure the enactment of a good bill in this Congress.

I would be pleased to answer any questions you might have.

Senator **Chafee**. Mr. Mayor, won't you proceed?

## STATEMENT OF HON. FEDERICO PENA, MAYOR, DENVER, CO

Mayor **Pena**. Senator Chafee, thank you very much. Let me apologize to you and to my fellow panelists for my delay. I had advised my staff that I had another engagement and I am sorry I am late.

Let me say that obviously, I am happy to be before the Committee again. As you recall, I testified last year on this issue.

Today, I stand before you representing the 16,000 cities and towns represented by the National League of Cities, the U.S. Conference of Mayors, and of course, myself, as mayor of the city and county of Denver. For the record, Senator Chafee, I would like to formally submit my testimony, the resolutions and policies adopted by both organizations, and my testimony from the last appearance which I will not repeat, thankfully.

Senator **Chafee**. You have it memorized.

Mayor **Pena**. Let me also say, Senator, that I want to congratulate you and the members of this Committee for the leadership you have provided. Also, the fact that we now, I think, have the House and the administration working positively to get a bill passed and for that, we are very thankful.

Let me tell you what I am not going to do this morning. I am not going to repeat the problem, I think you have already heard plenty of testimony about the severity of the problem. I am not going to talk about the progress that has been made at the local level, through hard work.

I am going to talk about 10 particular issues that both organizations that I am representing here today have concerns about.

The first is lack of reliable data in order for us to complete emissions inventories. We want direction to be provided to EPA to develop guidelines to both the localities and the States for monitoring an inventory. You will recall that cities like Phoenix have spent over a million dollars developing their own inventory. We spent over a million dollars in Colorado.

New York City—we testified with them last year— spent a significant amount of money. That would be very helpful to us, if EPA could give us some stronger direction so we can develop State implementation plans that are more effective and more meaningful.

Second, we support the concept embodying the bills giving those cities which have the greatest problems more time to come into compliance. There is one interpretation of the bill that indicates perhaps the city and county of Los Angeles may be the only city which has 20 years within which to come into compliance. I simply want to note for the record that there is a question about whether a couple of other cities may also need that kind of flexibility.

Third is the area of sanctions. I have testified as a matter of record, and I think both organizations are strongly supporting this position. We believe that sanctions should be mandatory, that sanctions should be mandatory, not discretionary. There are some very good reasons for that.

We have been at this for 20 years. We are going to be at this for another 20 years. We are going to be at this for almost half a century, in terms of trying to clean up our air. It is our strong feeling that cities and areas that are submitting SIPs in good faith, and implementing those SIPs in good faith should not be sanctioned. But those areas which are not doing any good faith, Senator Chafee, should be sanctioned. I think that is a very strong message that needs to be said.

However, we would hope that the sanctions which are imposed are not counterproductive. For example, stopping State air grants is not particularly helpful. Banning drinking water taps is not helpful. What we do think is an effective sanction is the question of offsets, and also putting the responsibility on the level of government that is most responsible for not complying with the SIP or the other measures in the Clean Air Act.

A fourth area we are concerned about is PM-10 standards. This is a new area for us, and the idea that we have to comply within 10 years is troubling and challenging for us. We will do everything we can to comply, but we think if we use the standard of looking at the severity of the problem, rather than simply saying 10 years, that might be a more effective way of dealing with an area where there is still a significant amount of unknowns.

We strongly support, both the National League and U.S. Conference of Mayors, the enhanced inspection and maintenance program of motor vehicles. If you will recall, Senator, I served in the legislature for 4 years in Colorado, we passed the inspection and maintenance program years ago. It was controversial, but I have to tell you, it would not have passed had we not firmly believed that Federal sanctions were not going to be applied. We believed that they were going to be applied, that's why we passed the bill.

Now, in the enhanced inspection area, we strongly support the Stage II vapor recovery, and stronger provisions for alternative fuels than we find in S. 1630; and candidly, we find that in reviewing both S. 1490 and S. 1630 that S. 1630 is more consistent with the policies of both the National League and the U.S. Conference of Mayors.

We need more specific oxy fuel standards. As you know, Denver is in the second year of an oxy fuel program. We are going into our third year. We suggest a standard of 3.1 percent for oxy fuel.

We strongly support tighter tailpipe standards for mobile sources. We know this is very controversial, but we know that because of the strong action of the Congress in the past, we now have cars that are burning more cleanly. We need to ensure that in the 1990's as VMT increases, and we hope that you address that issue also.

Last, extending the useful life requirements of light duty trucks and cars to 10 years and 100,000 miles we believe, in Colorado and throughout the Nation, will be one of the most effective ways in which we can help clean up our air.

In Colorado, and Denver, we are concerned about cold start standards. They are essential. We support the 10 gram per mile at 20 degrees Fahrenheit.

Senator Chafee, I don't want to go on, my time is up. I thank you for giving me an opportunity to represent both organizations and myself. I am happy to answer any questions, and again, I commend you for the leadership this Committee has brought to this issue.

Senator CHAFEE. Thank you, Mayor Pena, very much. You have been an excellent witness before this committee in the past and again today, and we appreciate it.

I was interested in what you said about the oxygen requirement, because many of those who oppose the 3.1 oxygen requirement we have, use Denver as an example of why it is not necessary. Yet, Denver currently requires—what do you require now, 2.2?

Mayor PENA. It is 2.5, but I think we are going to increase that.

Senator CHAFEE. You are?

Mayor PENA. At least, we are trying to.

Senator CHAFEE. But you support it in this legislation?

Mayor PENA. Absolutely. Senator, I would like to explain that rationale. When we first started this program 2 years ago, there were lots of concerns raised by many people, concerns that somehow cars are not operating efficiently and we are going to have all these problems.

The fact is, we have not had those kinds of disastrous consequences. We are going on our third year. So I think you can look to us for our experience here for some confidence that these types of programs do in fact work.

Senator CHAFEE. All of you have testified that you support very strong tailpipe emissions standards. I think we have got to recognize that although I don't think the cost increase in an automobile is going to be perhaps as much as the automobile company suggests, nonetheless, there is probably going to be an increased cost.

So I just caution you folks that there will be some consumers out there that will be unhappy. As the deluge perhaps falls upon us here, we look to you to stay in the trenches and not retreat.

As the price of a car goes up, there will be complaints about what is happening, that this air problem is really not all that bad, and that people are not dropping dead in the streets, so what's the fuss?

I hope we can count on you as firm allies as the objections come in.

What I would like to do is get comments from each of you and some of you, have touched on this, on the sanctions provisions. Why don't we start with you, Mr. Dougherty, on the sanctions provisions in S. 1630? What do you think of them.

Mr. **Dougherty**. Thank you, Senator. We are concerned that the sanction provisions be tied closely to the deadlines. If there are any extensions allowed, then the areas that have already tried and have already been working need to know that they are not basically doing everything for naught while everybody else is out there trying to get an extension, but not really meeting the deadlines, and can get off scot-free.

We believe they should only be imposed when an area fails to fully implement a plan, when they fail to properly plan and submit those plans or fail to comply with specified control requirements. In relation to that—that is what the NCSL is proposing before you. Those parts of S. 1630 we are in full agreement with.

Senator **Chafee**. Mr. Franke.

Mr. **Franke**. Thank you, Senator. From the counties' perspective, we are pleased with what we have seen in S. 1630, and supportive of it. I think we have seen the deemphasis on purely what we have referred to as punitive sanctions for lack of attainment. We certainly agree with the sanctions for those areas who are not planning, who are not making any effort for attainment.

We certainly concur with the Mayor's comments in terms of when the sanctions are applied, they should not be sanctions that hamper or damage other environmental or public health programs, such as sewer, infrastructure money, solid waste grants or something like that. When you try to deal with another major public health environmental problem, a sanction for the Clean Air Act should not have a negative impact there.

Senator **Chafee**. Mayor, you touched on this in your discussion. Do you want to amplify at all?

Mayor **Pena**. Just a little bit, and it is very similar to the previous comments. That is, that both organizations support the sanctions provisions generally. The question arises to the out years. What happens if, in the SIP, a locality agrees to do 10 strategies? EPA approves it. We all believe we are going to meet the annual reduction. We make our good faith effort to do it, but we don't meet the mark, for some reason.

Does that area then become sanctioned or not? I would respectfully suggest that if we are all doing the most that we can, and we are acting on the best scientific information available, that it might not be a fair standard to apply, to suggest that the city has acted in bad faith. So I think we are mostly concerned about meeting those goals in the outer years, perhaps some accommodation could be made. I don't have an answer for you this morning, but at least to address that and recognize it as a problem.

Senator **Chafee**. It seems to me, if you are going to apply sanctions, apply them uniformly, so that somebody else does not get away. Nothing irks any mayor or county executive or legislator more than to see his entity laboring under sanctions or under some kind of a restriction, when the next door neighbor is getting away with what he envisions as no restrictions for the same offense.

So the problem comes if you give too much leeway to the administrator, then the question is whether the sanctions are ever imposed. There is reluctance. There is a lot of pressure put on EPA to not impose sanctions. Frankly, sanctions have rarely been imposed in the past. I don't think they are a joke, but they are not much of a threat. I tend to believe that we need to be fairly tough with these sanctions.

This is a question for Mr. Franke. How appropriate do you think it is for public officials to take actions to reduce automobile trips or vehicle miles traveled as part of the pollution reduction effort? Everybody has testified about the love affair Americans have with their automobile.

Mr. **Franke**. Yes.

Senator **Chafee**. And it is a love affair that revolves around single occupancy of an automobile. I think Americans feel crowded if there is anyone in the automobile besides himself or herself. This is not restricted to out in the hinterland. I drive to work every day, and the George Washington Parkway is crowded with driver only vehicles, including the one I am in, so I am an offender as much as anyone else.

But what actions do you think you can take? You are out there, you are an elected official, and I am going to ask you the same question, Mayor.

Mr. **Franke**. My direct answer first, Senator Chafee, is that I think it is very appropriate for elected officials to take positions and to attempt to deal with that very difficult situation. I think one thing we can all do is to continue and really increase our support for mass transit and carpooling. They are not easy to accomplish, and mass transit, the ones that I have seen that are really successful, of course, are fairly capital intensive in terms of getting them started.

But I think it is very appropriate. I think the answer there is to push for carpooling, to support and push for additional mass transit resources, I think, quite candidly, both at the local, State and the Federal levels, if we are seriously going to try to provide some realistic alternatives that will be available for the citizen to try to wean them from the car.

Senator **Chafee**. What do you do out your way? Do you encourage carpooling, or high occupancy vehicle lanes, or what do you do?

Mr. **Franke**. We have quite a variety of things in Oregon. We are not the most populous State in the country, but then again, probably three quarters of our population is in the Williamette Valley Corridor with Portland, Salem, and Eugene. So if you look in that corridor for what we are doing, you can see the Portland metro area is doing the most.

They have a much publicized mass transit system in MAX, which is the light rail system that they have recently developed. Ridership has exceeded all estimates. It seems to be very effective in attracting ridership and they are now pursuing——

Senator **Chafee**. In your area?

Mr. **Franke**. Yes.

Senator **Chafee**. What's it called?

Mr. **Franke**. MAX is the acronym for it. It is a light rail system running from the neighboring community of Gresham into the Portland area. I forget the exact mileage offhand, but it is exceeding all estimates of ridership, so it seems to be really attracting people.

Also in the Portland area, which has most of our population, we have carpool lanes, where we encourage multiridership. In all the three major cities I mentioned we do have transit systems. Portland is the only one that has what I would call a light rail system. Salem and Eugene, I think, have very good bus systems. All three cities encourage carpooling. The State encourages carpooling. The State contributes some money to all the mass transit systems in the State to help fund those. So there is a variety of things that we are accomplishing in our population areas.

Senator **Chafee**. How about you, Mayor? What do you do out your way? Were you here when Senator Wirth testified? I guess you were not. Senator Wirth said 30 million automobile miles are traveled every day in the greater Denver area.

Mayor **Pena**. That's a lot.

Senator **Chafee**. That is a lot. If somebody had asked me before how many miles were traveled, I don't know what I would come up with but it wouldn't be anything like 30 million.

Mayor **Pena**. Well, Senator, out West we have five cars per every individual. We take this American dream very seriously.

Let me answer your question seriously. I agree with everything that was just said about the support for rapid mass transit. We in Denver do not have light rail. We are trying to get it built, and we are working on it. We are, however, building an HOV lane on our major highway, which will require usage of three or more passengers in the car and buses.

We have exclusive bus lanes that we are using in certain areas of the metropolitan area. We have had a better air campaign for the last 5 years, which is a voluntary program where we ask people not to drive their cars on bad air days. We passed a mandatory ban on wood burning stoves and fireplaces on bad air days, not only in Denver but in most of the cities throughout the metro area.

Just yesterday, before our city council, I proposed that we begin to look at things like idling, and that is whether we should have restrictions on the amount of idling that we have for cars that are in lines for fast food restaurants or other facilities, or banking facilities and so forth, so to answer your question, those of us who have the responsibility to issue public policy are prepared to do it.

My answer to your question is yes, I think it is appropriate for those of us who have the responsibility to take those kinds of action, even though they are difficult and controversial. I find that when you do them, and present them to the public, at first, there may be some resistance, but I think over time people recognize that they are working, and then accept them. It is up to us, however, to come up with those strategies.

Senator **Chafee**. I think probably the public, in your area, must be conscious of the dirty air and the problems they are having. You have a lot of problems, haven't you?

Mayor **Pena**. That's right. And to respond to another question you asked earlier about costs, every poll that we have taken in Colorado for the last 4 or 5 years always concludes that air pollution is one of the top concerns of people, and more than that, that people are willing to pay. When asked the question "Are you willing to pay money to clean up your air?" people answered "yes." And we asked the question about how much they would be willing to pay per month. I can give you the results. But we are not going to abandon you if you suggest you weren't earlier.

Senator **Chafee**. We're not asking you to come to our rescue. Some of the fallout might come on you as elected officials. Your opponent in the next campaign might say that mayor came up there before the Congress of the United States and he asked for all these tailpipe emission reductions for automobiles. He's responsible for the price of my car going up $500.

Mayor **Pena**. It is tough to make those decisions but we are prepared to accept that responsibility.

Senator **Chafee**. Well, I'm sure you are.

Mr. Dougherty, Representative Dougherty? What about Stage II? You have Stage II out in your area, don't you? How has that been accepted?

Mr. **Dougherty**. With kicking and screaming.

Senator **Chafee**. I was going to say, what do the small gas station owners think? For example, I am a small businessman. What's the price estimate for a station?

Mr. **Dougherty**. We have had it now for over a year. Kicking and screaming is exactly what happened, threats that everybody would be going out of business, that only the big boys would be left. My understanding is that very few people decided to close shop because of that. It was like $1,500 to $2,000 per nozzle, as I recall, to set up that particular system. It is an accepted way of life now. As you said, it doesn't take too long. It is a good thing.

A quick analysis of a year's worth of testing has indicated that we do believe it has had a positive effect in the metropolitan area in St. Louis in reducing the exact emissions that it was intended to reduce. That was published earlier this year as an estimate for this year. We were quite surprised. I don't think anybody expected to see a reduction in 1 year. We believe it is attributable to that.

Yes, kicking and screaming, but it has produced the results.

Senator **Chafee**. You say kicking and screaming—kicking and screaming against who?

Mr. **Dougherty**. The State. The State of Missouri Department of Natural Resources and Environmental Quality, the ones who basically came down and put the hammer on everybody saying, "OK, it's time to do it." So then of course, they complained to us, as legislators, but there is really no recourse.

Senator **Chafee**. They say it's all the State's fault?

Mr. **Dougherty**. We tried to find somebody to pin it on. No, we actually, quite frankly, I didn't get too many calls, although I know some of the others did.

Senator **Chafee**. Good. OK, gentlemen, thank you both very much. I know you have come a long way to testify and we appreciate it. You have been very constructive. You are going to see this legislation passed in this Congress, not this calendar year, but in the next calendar year.

Mr. **Dougherty**. Thank you for your leadership, Senator.

Mayor **Pena**. Thank you, Senator.

Senator **Chafee**. Thank you.

The next panel is Mr. Donald Theiler, from the State and Territorial Air Pollution Program Administrators, Mr. Len Bruckman, from Environmental Protection of Hartford, Mr. Anthony McMahon, from New Jersey, and Mr. William Wallace from Santa Barbara.

We welcome you. Why don't you start, Mr. Theiler? We will put all your statements in the record, so please summarize to stay within the 5 minutes.

## STATEMENT OF DONALD F. THEILER, DIRECTOR, WISCONSIN BUREAU OF AIR MANAGEMENT

Mr. **Theiler**. I will stay within the 5 minutes.

My name is Don Theiler, and I am the Director of the Wisconsin Bureau of Air Management. I appear before you today on behalf of STAPPA and ALAPCO, the two national associations of State and local pollution control officials.

Nonattainment of the health based national ambient air quality standards for ozone, carbon monoxide, and particulate matter represent a pervasive and persistent problem in this country, posing a serious health threat to hundreds of millions of our citizens. In our written statement, we have documented the health effects associated with these pollutants.

For the past 8 years, the issues surrounding Clean Air legislation have been intensely debated, and for 8 years a solution has remained elusive. Now, more than ever before, it is imperative that the Congress take action. Senator, our association's applaud your Subcommittee's leadership in developing legislation to address the country's ubiquitous nonattainment problem. We believe that S. 1630 is a fine piece of legislation.

I will limit my statement today to the provisions of this bill; the associations' comprehensive comments on the administration's clean air proposal are also attached to my written testimony.

We are particularly pleased that S. 1630 embodies many of the principles contained in our nonattainment control strategy, and we would like to thank you and the Committee staff for your responsiveness in this regard.

We strongly support the structure of your bill, including provisions classifying nonattainment areas and establishing deadlines according to the severity of the areas' air quality problem, requiring increasingly stringent control measures based upon an area's classification, prescribing a set of Federal control measures, and technology standards for previously uncontrolled sources, tightening the motor vehicle control program, identifying and requiring transportation control measures, and addressing interstate transport of pollution.

We are also pleased that the bill imposes sanctions only for failing to submit or implement a required plan, not for failing to attain the standards despite these good faith efforts.

With respect to ozone, we believe that there is considerable merit in requiring nonattainment areas to achieve a 12 percent reduction in emissions every 3 years. We also appreciate the bill's flexibility that allows areas to take credit for most control strategies and averages emissions over each 3-year period.

Our associations are gratified that the bill includes requirements for the issuance of at least 12 control technique guidelines for categories of stationary sources which are currently uncontrolled. We believe that such guidelines will play a vital role in providing States and localities with important regulatory tools necessary to attain and maintain the standards.

We are also pleased with the control programs for carbon monoxide and PM-10 nonattainment areas. With respect to mobile sources, we strongly support the provisions of this bill and believe these measures will play a large role in significantly reducing levels of ozone and carbon monoxide.

Mobile sources are the dominant source of ozone precursors and carbon monoxide responsible for over 50 percent of our Nation's ozone problem, and about 90 percent of our CO problem. Without strong measures to address these sources, all of our other efforts to ameliorate ozone and carbon monoxide nonattainment problems will almost certainly be frustrated.

The associations endorse the bill's first phase of tailpipe standards for passenger vehicles and light duty trucks and find the schedule for implementation to be appropriate. We agree that the standard should take effect as quickly as possible, and apply for the full life of the vehicle, that is for 10 years and 100,000 miles.

We also endorse the second phase of the tailpipe standards and note, that while they are technology forcing, they do not take effect until the year 2003, which should give manufacturers sufficient time to develop the necessary technology.

Our associations commend the Subcommittee for including this second, most stringent phase of standards in that it is critical to continue to achieve significant reductions and emissions for motor vehicles into the next century.

We are very encouraged that the bill includes provisions for low polluting vehicles and suggest in our written statement how this program can be expanded.

Finally, we support the fee provisions in the bill and are pleased that they apply to operating permits and automobile registration. We are, however, concerned that the bill allows EPA to veto permits on a case by case basis.

In conclusion, the members of STAPPA and ALAPCO firmly believe that this proposal represents an aggressive yet realistic solution to one of the most serious environmental problems ever faced by this Nation. We commend you for a job well done.

I thank you for this opportunity to testify, and on behalf of STAPPA and ALAPCO, offer you our cooperation as you continue to address this difficult problem.

Senator CHAFEE. Well, thank you very much, Mr. Theiler. Furthermore, you finished right on time.

Why don't we go to Mr. McMahon, who is the Acting Director of the Division of Environmental Quality of the New Jersey Department of Environmental Protection, representing the Northeast States. Mr. McMahon.

## STATEMENT OF ANTHONY J. McMAHON, ACTING DIRECTOR, DIVISION OF ENVIRONMENTAL QUALITY, NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

Mr. McMAHON. Good morning, Mr. Chairman. My name is Tony McMahon, I am the Acting Director of the Division of Environmental Quality in the New Jersey Department of Environmental Protection.

I am here testifying on behalf of the Northeast States for Coordinated Air Use Management, or NESCAUM, of which I am currently chairman, regarding the Senate's and the administration's Clean Air Act legislation proposals.

The members of NESCAUM include the air pollution control agencies for eight northeast States, including Connecticut, Maine, Massachusetts, New Jersey, New Hampshire, New York, Rhode Island, and Vermont. I would like to commend the Senate Environmental Committee and the President for developing constructive proposals which embody many of the principles which NESCAUM believes are essential in providing improved air quality in the Northeast.

I also wish to lend support to the testimony provided by Mr. Theiler, from STAPPA.

Let me stress that the NESCAUM comments represent the collective technical judgments of the Northeast States' air quality control programs. Senator, I am not going to focus on the problems of air quality in the Northeast, but rather, I am going to focus my attention to the key items which the NESCAUM States believe are essential for a solid Clean Air Act.

First, NESCAUM States support the method of classification of nonattainment areas by severity for both carbon monoxide and ozone. Second, we agree with the compliance dates for carbon monoxide and ozone. We believe that these compliance dates are both reasonable and attainable.

Third, concerning stationary sources, we applaud the requirement that EPA issue at least 12 control technology standards on an accelerated schedule.

Fourth, NESCAUM States believe that a minimum level of reasonably available control technology or RACT, be required for all ozone nonattainment areas as well as those areas impacting on the nonattainment areas. Those minimum requirements are specified in our written testimony.

Fifth, we concur with S. 1630 provisions for tightening controls on emission standards for passenger and light-duty motor vehicles. In the Northeast, the motor vehicle contribution to the ozone nonattainment is at least 50 percent for ozone, and at least 70 percent of our carbon monoxide nonattainment.

Sixth, we further support S. 1630's provisions for the extended durability and warranty provisions on the motor vehicle emission controls, the 100,000 mile provisions. In addition, we support the carbon monoxide, cold start provisions and very importantly, we encourage the technology forcing standards for carbon monoxide, hydrocarbons, and nitrogen oxides for the year 2000 and beyond.

NESCAUM continues to believe that on-board diagnostic measures are needed for the Northeast States.

NESCAUM also supports the conformity (of plans) provisions contained in S. 1630 in the transportation guidance section.

In conclusion, the NESCAUM States believe that the provisions of S. 1630 being considered by this Committee include many needed additions and changes in the Clean Air Act for attaining carbon monoxide and ozone standards in the Northeast. The Northeast States have acted and will continue to act to further reduce the threat to public health by implementing regional emission standards strategies.

States cannot solve this problem alone. Federal action is needed to reduce vehicle emissions and regionally transported pollutants. NESCAUM is committed to working with Congress and the administration to develop and implement the most effective and reliable strategies to ensure the protection of public health.

We hope and trust that your continued hard work will provide a full Clean Air Act this year. I will be happy to answer any questions and provide any further information to the Committee.

Senator **Chafee**. Fine. Thank you.

Mr. Wallace, Chairman of the Air Pollution Control District of Santa Barbara, CA.

## STATEMENT OF WILLIAM WALLACE, CHAIRMAN, BOARD OF DIRECTORS, SANTA BARBARA COUNTY AIR POLLUTION CONTROL DISTRICT, AND MEMBER, BOARD OF SUPERVISORS, SANTA BARBARA COUNTY

Mr. **Wallace**. Thank you, Mr. Chairman. I am Bill Wallace and I am here to urge your Committee's support in protecting the health of those people who live in the California coastal counties through effective regulation of air pollution from outer continental shelf oil facilities.

I am a member of the Board of Supervisors of Santa Barbara County Pollution Control District. The comments I am presenting today are also supported in resolutions adopted by the County Supervisors Association of California, and the California Pollution Control Officers Association. It seems with the number of people being represented today that this bill ought to be a slam dunk. It sounds like everybody in the world is represented here one way or another.

Santa Barbara County, like all Southern California coastal counties, has unhealthy air. Despite all efforts to date, our ozone levels continue to exceed the health standards set by both Federal and State law. It is clear that all sources of pollution, from automobiles to the neighborhood dry cleaner to major oil facilities must be aggressively controlled if we are to achieve healthy air quality levels.

While my agency supports broad legislation governing all sources of air pollution, we intend to confine our statements today to our area of greatest expertise, regulation of air pollution from VOCs oil facilities.

I believe Santa Barbara County has probably more expertise with monitoring and dealing with the VOC impacts onshore than any other local government in the country. My agency is in strong support of section 327 and we appreciate its inclusion in Senator Baucus' bill. This section contains a very simple concept for regulation of VOCs pollution. VOCs pollution sources must meet the same air quality regulations as all onshore and near shore sources of pollution. It is that simple.

VOCs facilities must be regulated no more and no less stringently that on shore facilities. This will ensure that all facilities are developed equitably, and that the VOCS facilities carry their fair share of the burden for attainment of air quality standards.

Our principal concern to California coastal counties is that under current Federal law, VOCs development will interfere with, and probably prevent, all coastal counties from complying with Federal and State mandates to attain the Clean Air standards. Onshore economic growth could be significantly inhibited if these mandates force coastal counties to overcontrol onshore industries to compensate for unmitigated VOCs pollution.

This is entirely unsatisfactory, when cost effective, clean air technology for VOCs projects has already been demonstrated to be practical through its application in the VOCs offshore from Santa Barbara County. These methods are clearly demonstrated in the attachment that we include in our testimony.

Under Federal EPA mandate, my agency will be adopting over 30 regulations which will require pollution reduction in virtually every category of stationary and mobile sources onshore.

Senator CHAFEE. Could you touch on some of those? You don't have to list them here, but I think we can record you as being very strongly for the regulation of the VOCs facilities. No doubt about that.

Mr. WALLACE. In our attachments, Senator, we document the approval of Chevron, UNOCAL, and the Exxon facilities in Santa Barbara, and what, through hard negotiations with no help from the Department of Interior, we were able to get what we call a net air quality benefit from them. It included electrification, which turned out to be very cost effective in terms of the amount of tons of nitrogen oxide and hydrocarbons that were reduced.

We have done special studies forced through the oil companies on crew boats, and we have been able to reduce emissions by 50 percent on all crew boats. We have actually saved them fuel costs.

Senator CHAFEE. I didn't quite understand electrification. What do you mean, you ran power lines out to the rigs?

Mr. WALLACE. Right. The rig was going to use gas driven turbines, and it was going to have a tremendous polluting impact. It was going to negate every control measure we would have onshore from just two platforms. By forcing them through our onshore authority to electrify the platforms through a cogeneration process that they developed onshore, they produced their own electricity through cogeneration onshore to run the platforms offshore.

Senator **Chafee**. That is excellent. I am not trying to interrupt your testimony.

Mr. **Wallace**. One comment I will make, Senator Chafee. It seems like your Chairman was trying to find some kind of a mileage symbol, and if there was a need for any kind of compromise, how far out should you go. We can give you documentation from both EPA and the DOI that ozone travels at least 25 miles, which would cover, certainly, the problem in the California coastline.

There is documentation from the Gulf States that it does travel that far in those areas too, there are significant problems there, too, but at least the 25 miles from the near shore or from the seaward boundary of the States is something you might want to consider and we would be glad to provide you that documentation, as a minimum.

Senator **Chafee**. Are there any other parts of the bill you would like to touch on? Your testimony is pretty much devoted to the VOCs issue.

Mr. **Wallace**. We figured that because of our expertise in this area, we would focus mainly on that. The County Association of Supervisors statewide which doesn't always agree on a lot of these issues has endorsed this position, also, as well as the statewide air pollution control officers.

Senator **Chafee**. Do you have Stage II out where you are?

Mr. **Wallace**. It is now mandated statewide and there are two parts of our county, the second part now is mandated to have Stage II also. It is actually a statewide mandate.

Senator **Chafee**. All right. I have taken some of your time. Anything you want to add?

Mr. **Wallace**. I would like to comment that Senator Cranston and Senator Wilson did carry some of our testimony, so that about wraps us up. I do appreciate their support of this VOCs issue, too. Our Congressman, Mr. Messino, who has been very supportive of the oil industry in the past, is supporting this issue too. So we appreciate our local support.

Senator **Chafee**. Thank you, Mr. Wallace. Now, Mr. Len Bruckman, of the Department of Environmental Protection, in the State of Connecticut.

## STATEMENT OF LEONARD BRUCKMAN, DIRECTOR, PLANNING STANDARDS, BUREAU OF AIR MANAGEMENT, CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION

Mr. **Bruckman**. Mr. Chairman, my name is Leonard Bruckman. I am the Director of Planning and Standards in the Bureau of Air Management of the Connecticut Department of Environmental Protection.

I am here today representing the State of Connecticut to provide testimony on how pollutants are transported across State lines, and why regionwide controls of the ozone precursors, nitrogen oxides and volatile organic compounds are needed in order to achieve the ozone standard in the Northeast as well as in other areas of the Nation.

Ozone is one component of the photochemical smog, which plagues Connecticut and many parts of the Nation during the summer months. Because of the secondary nature of ozone formation, emission controls which reduce ozone precursors in a small State are not always capable of significantly affecting ozone levels locally. In Connecticut, ozone levels have declined steadily since emission controls have been applied to reduce ozone precursors. But the standard continues to be exceeded on a regular basis.

The trend in peak ozone concentrations during the 1980's in Connecticut has been downward, but over the past 4 years, the standard continues to be exceeded on an average of 21 days per year. Last year, a particularly hot summer, the standard was exceeded on 34 days, while this year, there were 13 such days.

Studies conducted by Connecticut in the early 1970's clearly showed that in addition to ozone, sulfur dioxide and suspended particulate levels in Connecticut were also being influenced by transport from out of State.

EPA has acknowledged this fact and embarked on a regional scale photochemical modeling study, ROMNET, which is designed to improve our understanding of this process for an area from Ohio and Virginia, northeastward to Maine. The Urban Airshed model is another such tool which has provided us with an improved understanding of the transport issue in the Northeast.

The OMNYMAP Study utilized the Airshed model to simulate ozone episodes which occurred in 1980 in the New York City metropolitan area. The model was found to perform reasonably well in predicting the New York City urban plume and peak ozone concentrations in Connecticut.

One of the OMNYMAP runs was made to assess the effect of ozone and precursor transport into Connecticut. In this run, all the VOC emissions from Connecticut grid cells were turned off. The results, surprisingly, had little or no effect on peak predicted ozone concentrations in Connecticut. This study showed that some of the highest ozone concentrations in Connecticut are dominated by sources which Connecticut has no ability to control.

Other OMNYMAP sensitivity runs were made to assess the influence on ozone levels of transport from outside the domain. This transport was found to have a significant impact on ozone levels downwind from New York City. A major transport-related problem which remains to be solved, then, is how to equitably apportion reductions of precursors, which are found through regional photochemical modeling to contribute to elevated local ozone levels.

Numerous studies have recently brought to light concerns over previous neglect in considering the effect that biogenic VOC emissions have on photochemical products. For example, daily biogenic emissions in the Atlanta area are approximately the same as the anthropogenic component.

For the OMNYMAP domain, EPA's emission inventory for a typical summer day accounts for approximately 22 percent of the total VOC emissions. Because biogenic emissions cannot be controlled, there is a limit to achievable VOC reductions, and this limit could preclude attaining the air quality standards through VOC reductions alone.

In a modeling study performed by Connecticut using the OMNYMAP data files, emissions of $NO_x$ and VOC were systematically varied above and below the base case, to assess model sensitivity to the magnitude of ozone precursor emissions. The results showed that peak ozone concentrations can be reduced most effectively by reducing both VOCS and $NO_x$. Less effectively by reducing $NO_x$ alone, and least effectively be reducing VOCS alone.

Previous strategies developed to attain the ozone standard neglected to consider transport from upwind of nonattainment areas, nor were $NO_x$ emission reductions considered as viable alternatives. As a consequence, they have failed to meet their objectives. Regional scale VOC and $NO_x$ controls are needed not only to improve ozone levels in Connecticut and the rest of the Northeast, but to reduce human exposure to toxic compounds, to improve visibility through reductions of smog aerosols, and to reduce acid deposition.

$NO_x$ emission reductions must be considered along with VOC reductions in the future development of air quality strategies in the Northeast and other ozone nonattainment areas which are dominated by transported precursor emissions.

For the written record, I am providing some figures documenting ozone trends and modeling results, and copies of two recent ozone studies conducted by Connecticut staff.

I am available to provide any additional information at the Committee's request.

I also endorse the testimonies of my colleagues from STAPPA and NESCAUM.

Thank you for giving me this opportunity to testify.

Senator **Chafee**. Senator Lautenberg is here, and I am going to have to go in a couple of minutes.

I know that Mr. Wedaa is on the panel to testify. I have to leave. I just wanted to ask a couple of questions, of those who testified, if I might, before I go.

In NESCAUM, Mr. McMahon, have all of your members adopted the reduced volatility levels in gasoline?

Mr. **McMahon**. All except, I believe, New Hampshire, which is moving toward that goal very quickly.

Senator **Chafee**. How does that work? What has been the response of the oil companies?

Mr. **McMahon**. Senator, the initial response was great concern, increased costs, and so on. But in fact the costs, at least certainly in the State of New Jersey, and the Northeast, costs have not increased significantly, as the oil companies had projected.

The impact, from an environmental standpoint, this last year from an ozone perspective, has been our best year of the decade. Now, we can't attribute all of those gains just to the reduction in VOCS and volatility. It was also a relatively cool and wet year. But nonetheless, it is clear that the measures have had an impact on improving air quality.

Senator **Chafee**. Does that mean that all the gasoline sold, for instance, in New Jersey, or the Northeast, meets these lower standards, these changed standards?

Mr. **McMahon**. That is correct. It meets the standards. We spoke yesterday at a NESCAUM meeting in New Jersey. Compliance throughout the region was very good, and there were very few noncomplying samples, showing that some of the gasoline did not meet the standards.

Senator **Chafee**. Why wouldn't that be an inducement for all areas of the country to adopt these standards?

Mr. **McMahon**. Apparently, the costs of achieving that lower volatility level are not insignificant. So I think more than anything else, the costs of the program. Still the program represents the most cost-effective strategy any area could adopt.

Senator **Chafee**. If that is true, then it must be reflected in the price of gas in your area. Is it?

Mr. **McMahon**. We are seeing maybe a penny, two cents and a half a gallon maximum increase. We are not seeing a large increase from a per gallon standpoint, but the overall costs when you look at the number of gallons that are sold and used, the actual dollars are fairly significant.

Senator **Chafee**. Senator Lautenberg.

## OPENING STATEMENT OF HON. FRANK R. LAUTENBERG, U.S. SENATOR FROM THE STATE OF NEW JERSEY

Senator **Lautenberg**. I will submit my opening statement for the record.

[Senator Lautenberg's statement follows:]

### Opening Statement of Hon. Frank R. Lautenberg, U.S. Senator From the State of New Jersey

Mr. Chairman, I'm pleased that you have called the hearings over the next 2 days on nonattainment.

Americans have a right to clean air. Their quality of life depends on it.

But over half of our population is exposed to pollutants which harm their health. We've gone too slow in ridding our air of these poisons.

And unless tougher measures are adopted, increased automobile use is likely to worsen pollution levels.

In New Jersey, the ozone health standard was violated 45 days in 1988, the highest number of violations in 5 years.

Levels were more than 66 percent higher than the ozone health standard. Our entire State is classified as an ozone nonattainment area even though we have some of the toughest air pollution controls in the nation.

And even if all emissions in New Jersey were eliminated for a day, portions of the State still would be in nonattainment because of pollutants transported from upwind States.

Mr. Chairman, the bill you introduced which I and most of the other committee members have cosponsored establishes the comprehensive program we need to address nonattainment. It provides tough programs to reduce emisssions of volatile organic compounds and nitrogen oxides.

And it establishes a program to control the transport of pollutants from upwind States.

I look forward to hearing comments on our bill over the next 2 days.

Senator **Lautenberg**. Mr Wedaa, you were scheduled for this afternoon, but we are pleased that you are here, and we would like to give you a chance to give your testimony now. You have probably heard that there is a 5-minute limit. Please proceed.

## STATEMENT OF HON. HENRY W. WEDAA, MAYOR, YORBA LINDA, CALIFORNIA, VICE CHAIRMAN OF THE BOARD, SOUTH COAST AIR QUALITY MANAGEMENT PROJECT ACCOMPANIED BY CAROLYN GREEN

Mayor **Wedaa**. Thank you. I appreciate the opportunity to go on this morning instead of this afternoon. I have been listening to some of your speakers here, and some of them have been saying the things that I was going to say, so I am going to shorten my comments.

My name, for the record, is Henry W. Wedaa, I am the mayor of the city of Yorba Linda, CA, and I represent the 27 cities of Orange County on the South Coast Air Quality District Board.

I am here today as Vice Chairman of the Board to express our support for the adoption of an aggressive Clean Air Act during this session of Congress. We are pleased that the President has taken a leadership role in the Clean Air debate with the introduction of H.R. 3030. However, the Administration's ozone attainment provisions do not address the South Coast Air Basin's special problems.

Therefore, I will focus my remarks on S. 1630 offered by Senators Baucus and Chafee. We think S. 1630 balances strong regulatory mandates with flexible market based incentives needed to encourage technological innovation. This balance is particularly important in the south coast air basin, which, as you know, has the most severe air quality problem in the Nation.

AQMD staff have prepared detailed written comments which I am submitting for the record. I have also brought for your consideration the executive summary of a recently completed health cost benefit analysis which my Board commissioned to better determine the value of cleaning up the air in Southern California.

This study, conducted by a multidisciplinary team of scientists, health researchers, and economists shows that air pollution costs money. Just meeting the Federal ozone and PM-10 standards could save the breathers of Southern California some $9.4 billion per year in health costs, and that is a conservative estimate.

If we take into account the damage to crops and materials, Southern Californians may well pay twice that amount for dirty air. I urge you to keep our health benefit study in mind when others are arguing that clean air costs too much.

I would like to focus my remaining comments on two important areas, the need for a strong Federal control effort, and the importance of $NO_x$ controls on new and existing sources. I cannot emphasize enough how important it is that the Environmental Protection Agency be a full partner in the cleanup of our Nation's skies. If EPA does not move aggressively to control those sources that are within its regulatory domain, the South Coast can never meet the health based air quality standards. Let me amplify this point briefly.

The air quality management plan that our board adopted earlier this year estimates that the 2,300 tons of reactive organic gases and oxides of nitrogen we put into our air each day must be cut to about 400 tons per day in order to attain the Federal ozone standard. That constitutes an 83 percent reduction in emissions over the next 20 years. Even in the face of a conservatively expected 37 percent population increase, and almost 50 percent job increase, we are willing to do our part on the State and local levels to get the job done.

We also strongly support the motor vehicle control program proposed in the bill, especially thee vehicle testing and certification procedures, the useful life provisions, the requirement for on-board diagnostic system, onboard control of evaporative emissions during refueling, and the technology forcing emission standards for the year 2003.

Finally, with respect to on road motor vehicles, we would like to ensure that areas such as the south coast have the ability to regulate both private and commercial vehicle movement on freeways to ease congestion and reduce air pollution. This includes heavy trucks, which, while they only constitute 10 percent of the vehicles, account for almost 30 percent of the congestion.

My final point has to do with the role of $NO_x$ control in achieving our air quality goals. The South Coast Air Quality Management Plan calls for reduction of both ROG and $NO_x$ emissions to meet the Federal ozone standard. There are two reasons for this dual control approach.

First of all, our long term air quality trends show that air quality in the region has improved more rapidly since we implemented $NO_x$ controls than when we controlled ROG alone. Outside our region, the recent studies of naturally occurring hydrocarbons in Atlanta also suggest that $NO_x$ control may be an important factor in ozone attainment. In Atlanta's case, the area has such a high level of naturally occurring ROG that $NO_x$ control may be the only way to meet the ozone standard.

In setting forth the control requirements for severe and extreme nonattainment areas, the bill includes $NO_x$ in the emission fee requirement. However, it is important that the year emissions reduction requirements apply to $NO_x$ as well as ROG, unless the region demonstrates that $NO_x$ control is not needed to attain any Federal standard.

I think I will end it there, sir. Much of what I have said has been said before by other members of the panel. I have with me Carolyn Green, the Executive Director of the Air Quality District, who will be happy to try and answer any questions you may have.

Senator LAUTENBERG. Thank you very much, Mr. Wedaa. Your full statement will be included in the record. We appreciate the fact that all of the witnesses have worked hard to make their presentations. The fact that you have had to do it in a fairly rushed fashion does not indicate either lack of interest or lack of value to the deliberations of this Committee.

I wanted, as you expect, to particularly welcome Mr. McMahon. He is from my home territory, and we take pride in the fact that New Jersey always has maintained a leadership position on fighting the pollution problems that we are subject to, some that we create and some that are created for us. That is essentially the nature of the discussion today, and I recognize, Mr. McMahon, that you are here today on behalf of NESCAUM. We appreciate the work you are doing there.

I have just a couple of questions, then my colleague from Connecticut, Mr. Lieberman, is here. You did very well, in fact, Mr. Bruckman. All of these witnesses, in all of the testimony that I have had an opportunity to read, have done very well.

I will just ask Mr. McMahon a couple of questions.

Mr. McMahon, all S. 1630 requires is that all States and regional transport control regions adopt enhanced inspection and maintenance programs, and implement existing control technology guidelines. The bill, however, introduced by Congressman Waxman, which I will assume you are familiar with, requires that areas in the region also have to have new or modified facilities to achieve emission offsets, Stage II vapor recovery and use of low emission transit, such as buses.

If you have had a chance to look at both of these, do you think that our S. 1630 goes far enough, or perhaps should we impose additional mandates for areas in transport regions as the Waxman bill provides?

Mr. **McMahon**. We have not looked specifically at this provision. I think any reasonable provisions that can be applied that will reduce overall ozone concentrations would be supportable. We have to look at it through overall balance.

Senator **Lautenberg**. Mr. Bruckman, are you familiar with that? Would you want to comment on that?

Mr. **Bruckman**. I have looked at the transport provisions very carefully. I would like to see the following changes, which I think would help solve the transport problem in the Northeast, including Connecticut. I would like to see $NO_X$ controls required for all 100 ton per year sources located in the transport region and to make Stage II controls mandatory, to not allow any opting out of these Stage II and $NO_X$ control requirements, but to allow some opting out for areas included in Groups 2, 3, and 4 categories, which are dominated by pollutant transport, such as Fairfield County, which is located in the New York portion of the Metropolitan Standardized Area.

I would like to see the transport region expanded to include all of the States in the ROMNET region, which is the modeling study that EPA is conducting to study this problem. I would like to see that ROMNET study expanded and funded beyond 1991. I am very pleased with the majority provision in terms of what would allow for opting in or out. I would think we would want to keep the majority provision as opposed to a unanimous type option.

I would like to see nationwide onboard controls, which I think would not only reduce toxic emissions, but also reduce emissions that contribute to transport from areas even outside of the transport region, which do have some impact on our air quality, but which are even harder to quantify.

Senator **Lautenberg**. So your advocacy is one that suggests to include as much of a rigid control standard as possible, you are saying that what we have to concern ourselves about is not so much the cost effectiveness, but rather what is required to produce the kind of healthy environment we want to achieve.

There is a fair amount of debate, as you all know, between costs and the air quality. For many of us, recognizing the impact that toxic air emissions have on the health and well-being of our citizens in that region of the Northeast, I think there are some 35 million people, if I am not mistaken, exposed to unhealthy air.

Let me ask you this question. S. 1630 requires implementation of existing control technology guidelines. Is there any reason not to require that those technology guidelines which EPA is going to prepare as a result of Clean Air legislation—should we demand that control technology be included?

Mr. **Bruckman**. It is my opinion that we should do so. I think that the concept of reasonably available means that if a control requirement is reasonable and it is available, it should be applied since it will help to solve a problem that is very difficult to analyze, to determine which sources and in what quantities contribute to downwind ozone levels. In all areas, where such controls are applied, we are going to reduce pollutant levels and in a holistic sense, it is going to reduce pollutant concentrations other than ozone. It is going to reduce toxics, and it is going to provide a lot of additional benefits. I believe that the application of such controls would be cost effective.

Senator LAUTENBERG. The administration's bill merely establishes a transport region that leaves all decisions on controls up to the controlled region, which will then make recommendations to EPA. Hasn't NESCAUM already recommended a wide-ranging series of actions to EPA, and how did the EPA respond? Did they express confidence about relying on EPA to impose controls in the transport regions?

Mr. MCMAHON. I don't know if it is so much a confidence problem as why not—these measures are available, they are reasonable, they are, we certainly believe at a minimum that these areas should in fact implement these measures.

Senator LAUTENBERG. Should we be leaving the decision to EPA?

Mr. MCMAHON. We are recommending that at a minimum certain provisions be included in the Clean Air Act for these areas.

Senator LAUTENBERG. Mr. Bruckman, do you want to comment?

Mr. BRUCKMAN. I just wanted to say we commend EPA for their efforts and for participating in this study that we designed to determine what things were reasonable and what things could be implemented. I think we had some agreement. But as you know, we have been a little slow on implementing the control strategies included in these agreements.

I think that legislation is necessary to provide a driving force to ensure that these things happen. I like the provisions that are in the Senate bill better than the provisions that are in the President's proposal in that area.

Senator LAUTENBERG. Let me ask you a question about buses. What role should low emission transit buses play in addressing nonattainment? Do they have a share to carry in this?

Mr. MCMAHON. Certainly buses have a share. At this time, there are Federal regulations that would require lower emissions from buses beginning in 1991. It is my understanding there is some consideration to delay that until 1993 or 1994. We have some concern about that.

Senator LAUTENBERG. Concern, how? Do you want it or don't you? What do you think is best to achieve the objectives that we want?

Mr. MCMAHON. I think the administration's bill provides for implementation of alternate fuels in bus fleets as an offset for the loss that might occur as a result of the delay of the standard. I think it is a reasonable approach progress in reducing emissions from buses is critical.

Senator LAUTENBERG. Should we require, Mr. Bruckman, that urban areas begin to phase in these low emission buses?

Mr. BRUCKMAN. I think we should do as much as we can to encourage mass transit where it makes sense. Certainly anything that we can do to increase the use of buses and other forms of mass transit would be a positive contribution. Now, as you know, not all areas of the country that contribute to the ozone problem are amenable to that type of solution. But it should be a component where it makes sense and included in an overall plan to solve the problem.

Senator LAUTENBERG. Is it a significant contributing factor?

Mr. BRUCKMAN. Absolutely.

Senator LAUTENBERG. Thanks very much.

Senator Lieberman, would you continue the hearing?

## OPENING STATEMENT OF HON. JOSEPH I. LIEBERMAN, U.S. SENATOR FROM THE STATE OF CONNECTICUT

Senator LIEBERMAN. Mr. Chairman, it is an honor to do that, thank you, Senator Lautenberg.

I also have an opening statement that I will submit for the record in the interest of time.

[Senator Lieberman's statement follows:]

### OPENING STATEMENT OF HON. JOSEPH I. LIEBERMAN, U.S. SENATOR FROM THE STATE OF CONNECTICUT

Mr. Chairman, thank you for holding these hearings. I welcome all witnesses, and especially Leonard Bruckman, from Connecticut's Department of Environmental Protection. He has a tought job, because Connecticut is right up on the list of the top 10 ozone pollution areas. All the other areas are cities; Connecticut has the "malodorous" distinction of being the only state on the list, to quote the American Lung Association.

Ozone pollution—smog—is the country's most persistent pollution problem. It impairs our health and affects the quality of our lives. It shortens our breath, damages our lungs, and keeps us indoors. Last month, some of the top environmental scientists in the United States met in California and concluded that smog can inflict irreversible, permanent injury on people in polluted cities, gradually crippling their lungs and triggering emphysema and chronic bronchitis.

Dr. Robert Phalen, of the University of California, told the Senate Environment and Public Works Committee at a hearing last April: "Ozone is harmful to health, even at relatively low concentrations. It is unusually toxic chemical." Other doctors have described the impact of ozone on lungs as similar to the effects of cigarette smoking and even mustard gas.

Frankly, I am astonished that some of the witnesses who will testify today do not believe the ozone problem requires "immediate action" and contend that this committee is acting on a false assumption about the severity and extent of the problem. I will want to hear the precise basis for this conclusion which contradicts the virtual unanimous opinion of the medical professionals.

The effects of carbon monoxide are also potentially lethal. Carbon monoxide pollution reduces the ability of blood to deliver oxygen to the body's tissues. Exposure of pregnant mothers to even modest levels of carbon monoxide may pose the risk of permanent brain damage to the fetus.

In a recent report, the Office of Technology Assessment concluded that it was critical to implement all steps possible to reduce smog. Even with these steps, areas such as my home State of Connecticut will still fall at least 20 percent short of meeting the standard.

These conclusions are startling and make clear that we must adopt all control methods known today and, of equal importance, find new and creative controls.

In my view, the bill introduced by this committee meets this challenge head-on. Most importantly, it contains tough controls on those sources which produce most of our Nation's smog and carbon monoxide emissions. Cars and trucks emit 40 to 50 percent of the Nation's hydrocarbons and 45 percent of its nitrogen oxides, which are the two precursors to smog. In many urban areas, these percentages are even higher, and cars are responsible for virtually all the carbon monoxide emissions.

At a national level, we must enact tough controls on motor vehicles to help the states and localities meet the ozone standard. We are receiving this message loudly and clearly. For example, seven Northeast States, including my State of Connecticut, tired of waiting for Federal action, recently acted on their own to adopt California's motor vehicle standards. They have determined that this is an essential part of any ozone nonattainment strategy.

The committee's bill also addresses another critical problem which can only be solved on a national level—that of ozone transport. The Connecticut Department of Environmental Protection has told me that, even if the entire state shut down, the ozone standard would still be violated because of pollution transported from other States. The Senate bill provides that all areas within a transport zone must bear responsibility for the ozone created in its state and transported to Connecticut and other states.

I look forward to the testimony today.

Senator LIEBERMAN. Thank you, gentlemen, for your testimony. I am sorry that I could not be here earlier, as I was at another hearing. But I appreciate not only your testimony and your presence here, but all that I know you have done in your own activities to make the air cleaner.

Let me give a word of welcome to Len Bruckman, who is, from my previous incarnation, whose orders it was my pleasure to enforce as Attorney General of the State of Connecticut. They were good orders, and good decisions.

I want to congratulate the folks from NESCAUM for the extraordinary leadership on a regional basis that you have shown. That really sets a standard for what we hope to accomplish here.

I have a couple of questions. The first will go to one of the problems underneath the problem of dirty air and that is the extraordinary reliance that we have in this country on the automobile. I don't have to tell you, one of the things that strikes me as I get deeply into this, my first year in the Senate, let us accept for a moment one of the arguments that the auto manufacturers make. They are making cleaner cars than they used to. We obviously want them to make yet cleaner cars. But there is a sense in which we are all just running to keep in place, because people keep buying more cars, and driving them more miles.

This Committee's bill contains some new approaches to transportation control measures, and I wonder whether you have seen them. If you have what is your reaction to them? Or, do you have any particular thoughts or proposals that we might further incorporate to get at the problem underneath the problem? Let me parochially ask Len if he wants to start.

Mr. BRUCKMAN. Senator Lieberman, I know I speak for all the citizens in the State of Connecticut in commending you on your strong efforts to promote good environmental legislation not only here in Washington, but also when you were in Connecticut. I think we need effective mass transit. We have to do things that will encourage mass transit.

But the biggest increase in automotive trips is not in the urban corridors where mass transit makes the most sense. It is in the suburban corridors. If you were in the Hartford area, you know when you go into Hartford, you see as much traffic coming out of Hartford as you see coming into Hartford. That portion of the problem needs to be addressed by the strongest possible controls on automobile emissions.

Stronger automobile controls are important, not only for reducing hydrocarbon emissions, but also for reducing nitrogen oxide emissions. What we can do to encourage more mass transit, we should do. We must improve those systems, but we have to watch those increases in suburban trips, which I think over time are going to have a significant impact on our efforts to solve this problem.

Mr. **McMahon**. I would like to add that NESCAUM would like to compliment the Committee on these measures. We think these are a step in the right direction.

Senator **Lieberman**. Thank you.

Mayor **Wedaa**. We in California, in the South Coast Air Quality Management District, certainly support all of the proposals. Part of the problem we have is that even though the cars have been cleaned up since the last legislation, we essentially say that the cars in California now only put out about one-eighth of what they were putting out before in terms of emissions, the fact is that we are still the dirtiest place in the Nation.

The problem we face, basically, is that by the year 2010, we are going to increase the number of people by 50 percent. So we are trying to get ahead, and everything we can do to get ahead by new emission controls we sort of get overridden by all the new people in all the new cars that are coming in. So we have a terrific problem, and as far as we are concerned, the more controls, the better.

And when you compare the costs of the controls on cars to the cost per ton that we as a district are imposing upon the stationary sources within that district, they are minuscule.

Senator **Lieberman**. That's a good point.

Mayor **Wedaa**. If we don't get it out of the automobiles, we are going to have to take it out of the other industries.

Senator **Lieberman**. Absolutely.

Mayor **Wedaa**. We don't really want to do that. We think those who produce should all help share in the cost of cleaning up.

Senator **Lieberman**. Can you, for our record, just spend a moment or two telling us about some of the transportation control measures that are either in place or being discussed in California?

Mayor **Wedaa**. Yes. One of the new things that we have underway is what we call Regulation 15, which is a trip ridership program. What we are doing is first approaching all the business that have 500 or more employees, and requiring them to initiate or to plan for a trip ridership program with incentives to the employees to go to ridership programs, car pools, or whatever.

The next step is going from 500 to 200, and we are now in the process of 200 to 100 employees. There is a wide variety of incentives that are being proposed by the companies and the companies are paying money to people and providing free parking, they are providing close-in parking, they are providing no parking, car pools to take you to and from work, they are buying vans, and there is a multiplicity. We could provide you a list if you like to have that.

Senator **Lieberman**. I would appreciate that.

Mayor **Wedaa**. We also have transportation management associations being formed throughout the area, which for example, in North Orange County, where I live, they are starting one right now for the businesses and agencies within North Orange County. This is happening throughout other parts of the basin, and so on.

Senator **Lieberman**. Do you want to add to that?

Mr. **Theiler**. Yes. I would just like to indicate that our Associations have done a survey of the innovative control technologies, including these transportation projects, and we will supply a copy of this to the Subcommittee for their use.

Also, I would just like to say that in your bill it is very gratifying to see the issue of transportation control projects that are promoted by the Department of Transportation, that these have to deal with the air quality goals in the areas of concern. This has been a big problem for some of us.

Senator **Lieberman**. Yes. Our hope there was to make that link as clear and tight as we could in this bill.

Mr. **Theiler**. Yes. It is very important to us that these projects contribute to the improvement of air quality, rather than the degradation.

Senator **Lieberman**. Absolutely.

Mr. **Wallace**. Senator, I come from a very suburban area and this issue of mass transit versus getting people out of their cars—we are looking at the job issue too, in Santa Barbara County. I think, and this may go way beyond what is in the Clean Air Act Amendment, but I think somewhere in this country there has to be developed a real sense of urgency, and people have to feel like they are all in it together, that they are all contributing toward it. The greenhouse effect may be one of the ways to do that, because no matter where you are, that's having an impact on our future environment.

Hopefully before the crisis hits, this idea of getting people out of the cars—we simply can't afford to build the roads fast enough in California, regardless of what the air quality issue is. And the resources that have to go into the freeway system, and the waiting—it stops on us, even in suburban areas. So somewhere the leadership has to come, whether it is on a regional basis or on a State basis, or on a national level, I think it is going to have to come from all three.

People have really got to think that the world is not going to survive if we keep up this habit. We have to be part of the solution and not part of the problem.

Senator **Lieberman**. Amen. I agree and hope we can show some leadership from here on out.

Let me go on to another subject which is $NO_X$ controls. Many of us in this Committee are concerned that the President's bill does not contain $NO_X$ controls for motor vehicles that are as strict as the California standards. The Office of Technology Assessment, in a report last week, concluded that $NO_X$ controls could be very important.

Our DEP in Connecticut, I believe, has suggested that the ozone standard can only be met in our State if there are adequate $NO_X$ controls. What is your view of this whole area of strong $NO_X$ controls? Let me put it in perhaps a biased way, but do you believe there is justification for not adopting the California standards nationally?

Mayor **Wedaa**. Let me say that 2 months ago, we passed two new rules, 1134 and 1135. Rule 1134 was addressed to stationary sources within various industries, and Rule 1135 was addressed to the power plants in the area. As a result of implementation of those two bills by the year 2000, we will have reduced the $NO_X$ generated in the air quality management district by more than 90 percent.

Senator **Lieberman**. That is impressive.

Mayor **Wedaa**. We believe it is impressive. Let me say that $NO_X$ is a very important thing to get after, and we are working on it.

Mr. **McMahon**. Senator, as the data unravels, it becomes more and more clear that $NO_X$ is an integral part of ozone control. The NESCAUM States see no reason why the California standards should not be applied nationwide. I think that we have taken that up pretty clearly.

Senator **Lieberman**. Great.

Mr. **Bruckman**. You have accurately characterized our State's position. We have done the studies, we don't believe we can attain the standards in the Northeast unless we do both hydrocarbon and $NO_X$ controls and the California mobile source control program does a lot of both, not only now, but they are anticipating doing additional things in the future that would even further decrease emissions from automobiles. I think it is critical that we move forward in this area and I see no reason not to do so.

Mr. **Theiler**. We also very much support the Phase I and importantly the Phase II requirements, which again have those emissions requirements. I would also like to point out that we are dealing not just with the ozone problems with $NO_X$ controls, but acid deposition and the fine particulate acid aerosol issues. It is a critical problem in many areas that needs to be addressed.

Senator **Lieberman**. Let me just follow up on that, because Bill Reilly, who we agree with, contended before this Committee that when it comes to the acid rain contents that you just mentioned, $NO_X$ controls are not really cost effective. Do you have any experience or basis for responding to that contention?

Mr. **Theiler**. I didn't hear his testimony yesterday, but certain $NO_X$ controls using low-$NO_X$ burners at utility facilities is available technology and it is cost effective. I am not sure where his information is coming from. We also believe that this is true for automobiles.

I think that it is a technology forcing issue, as we suggested in our testimony. Some cars are already meeting these levels of requirements on the 50,000 mile tests that are being conducted. We think it is available and can be implemented in a cost-effective fashion.

Senator **Lieberman**. Mr. Wallace, do you want to add anything?

Mr. **Wallace**. We have found in our area that if you don't reduce the $NO_X$ at the same time you reduce the active hydrocarbons, you are just not going to get to the Federal standards. So we have taken the attitude that we have to cut both of them in half in order to make it. In terms of precursors of ozone, we simply won't meet Federal standards unless we have an equal reduction of both.

Senator **Lieberman**. Before I go on to my next question, I note the presence in the room of Senator Robert Stafford, the former Senator from Vermont, the Chairman of this Committee, ranking member, a real leader and may I say, somebody who followed these deliberations here as a citizen who is concerned about the environment, and then as an environmental Attorney General. He is a real hero to many of us who were out in the field. It is a real honor for me to be sitting in this chair to note your presence and to welcome you to the room.

Let me go on to just a couple more questions before we wrap up. Obviously, the President's position on alternative fuels has aroused a lot of interest and controversy. I believe, Mr. McMahon, that there is some feeling in NESCAUM that the alternative fuels proposal might actually be detrimental to the Northeast. Am I correct in that? If so, how, if not, give me a reaction.

Mr. **McMahon**. I don't know that we have concluded that, frankly. We are meeting today, we met yesterday with the EPA representatives to discuss the alternative fuels program. We are meeting today with industry representatives to discuss the alternative fuels program. We certainly feel that an alternative fuels program is necessary, but whether it will be detrimental, whether we can fully support it, we would like to supply some comments later if we could.

Senator **Lieberman**. A final series of questions. I hope it hasn't come out earlier, but if it has, please tell me. Yesterday, Administrator Reilly proposed an engine family averaging which he believes would not increase emissions. I guess I wanted to ask you, whoever wishes to answer, what your view is of averaging in general, and of engine family averaging in particular?

Mr. **Theiler**. We have taken a position in opposition to averaging. Today, in the Clean Air Act, we do not have averaging. This appears very clearly to be a step backward in terms of pollution control. There doesn't seem to be a justification for this averaging, and we do not support it.

Mr. **Bruckman**. I would endorse the same thing. We don't like averaging either.

Mr. **McMahon**. We have not seen the proposal from yesterday, but at this point we do not support averaging.

Mayor **Wedaa**. We don't support it either. As a matter of fact, our analysis shows a 35-percent increase in ROG if we do.

Senator **Lieberman**. Tell me a little more about that.

Mayor **Wedaa**. Carolyn, can you tell us a little more about that? I have my technical expert here.

Senator **Lieberman**. Will you identify yourself for the record, please?

Ms. **Green**. My name is Carolyn Green, I am the Executive Officer of the South Coast Air Quality Management District. We ran some preliminary analyses of the averaging proposal based on existing California emissions performance. What we found is that there is so much play in where the vehicles are within an engine family that we could have at the high end about a 35 percent decrease in performance without anything else happening to improve the low end vehicles. So we are really concerned about it. That is existing.

Senator **Lieberman**. It is very important for us to know.

That concludes my questioning, unless any of you have anything you want to add for the record before we conclude.

Mr. Wedaa.

Mayor **Wedaa**. I would like to add one point relative to your $NO_X$ comments earlier. Whereas the Bush proposal calls for 0.7 grams per mile, the Waxman is 0.4 grams per mile, the Baucus is 0.4

grams per mile, the current standard or the standard that has already been established for 1996 in California is not 0.7, or 0.4, but it is 0.2.

Senator **Lieberman**. That is important for the record.

Mr. **Bruckman**. Mr. Chairman, I have one more statement about alternative fuels. The Northeast has spent some time considering this control option and I, with Mr. McMahon, participated in meetings on this subject. I think our position is that we would support anything that would effectively reduce hydrocarbon emissions.

However, there is just not a lot of information available at this point in time on the benefits of such a control program, especially considering the mix of sources in the Northeast, to fully evaluate those claims. So we are looking at it cautiously. We think we need a lot more information before we can buy into the program.

If it truly does as advertised, it would be a very effective program although it does not provide any nitrogen oxide controls, and that would be a concern.

Senator **Lieberman**. I thank all of you for your time and what you have done. If I may repeat a sermon that I gave yesterday—your presence here is very important. What you do when you go home is very important, too. I am new here. This is my eighth month, or ninth month here, I guess. This is an extraordinary piece of legislation, and the legislative process that is going on right now—I don't have to tell you it is an intensely lobbied bill. I don't demean lobbying. That is part of the process.

But it is critically important that the forces that you represent and the people that you represent in your States and localities who, I think are way ahead of us here in Washington, in terms of the level of the demand and desire for clean air, will really be part of this process. You are some of the voices that speak for them.

I thank you for being here today, and I hope you will hang in there as this bill works its way through the process in the next several months.

The hearing is recessed.

[Whereupon, at 12:28 p.m., the hearing was recessed, to reconvene at 2:00 p.m. the same day.]

## AFTERNOON SESSION

Senator **Baucus**. The hearing will come to order. I am going to change the panels, for various reasons. On Panel One I would like to have Mr. Dwaine H. Smith, from Arco Products, speaking on behalf of the Clean Air Working Group, along with Mr. Richard Ayres, of the National Clean Air Coalition. Since Mr. Hank Wedaa testified this morning—he was scheduled otherwise to appear on Panel Two this afternoon—I will combine the other four witnesses as Dr. Harvey Alter, Mr. Bruce Chiles, Mr. Larry Feldcamp, and Mr. Ralph Engel together in the Second Panel.

Let's first hear from the first panel, Mr. Smith and Mr. Ayres.

## STATEMENT OF DWAINE H. SMITH, SENIOR VICE PRESIDENT OF MANUFACTURING, ARCO PRODUCTS CO.

Mr. **Smith**. I am Dwaine Smith. I am in charge of refining and technology for the Arco products company, and as you indicated, representing the Clean Air Working Group today. We have, as many have, submitted a very large, voluminous testimony. I am not going to begin to try to encapsulate all of that in my testimony, but I will hit the high spots.

The first point I would like to make is to emphasize the importance of a systematic and realistic planning process for the air quality program. Ozone nonattainment is a matter of great concern, but our reaction cannot be helter-skelter. A helter-skelter kind of reaction results in deadlines that are set, and not made or met at all, and expensive control requirements imposed that turn out not to get the job done.

So we are urging that we do it right this time. We need an advance planning program, and that is going to take time. We need to analyze more thoroughly both the problems and the solutions. This will enable us to develop effective control strategies to evaluate and prioritize the control update according to the effectiveness and relative costs, and set realistic deadlines.

I don't want you to get the wrong idea. We are not recommending that this stop progress. We don't want to do this in series with other programs, rather in parallel. We are recommending that there are number of control mandates already in place that should continue to be applied. Other measures will be appropriate under any plan and can be commenced after relatively quick analysis.

The planning process is designed only to keep us from adopting elaborate and expensive strategies that depend on conjecture, rather than knowledge. The advance planning program in itself is an action plan.

Turning to S. 1630 itself, there are a lot of things that we endorse. The idea of improved emission inventories, making them comprehensive is one. In particular we are pleased to see a sensible concept that new SIP's are not due until a year after the inventories are completed. We also support the bill's encouragement of modeling, and its recognition of the need for significant differences in the treatment of VOCs and $NO_X$.

This process, however, dictates that we concentrate on the negative, or areas of disagreement, and I would like to do that now.

First in the area of operating permits, both for new and existing sources, that would be issued only after an onsite inspection and in a public hearing on each permit, we believe will result in confusion, delay and waste. Ensuring compliance with emission limits is very important, but to do this through a rigid permit process imposed by Federal levels, we believe, is not warranted.

Even now, in my area in Southern California, the South Coast District might take a year or more to get a permit. The South Coast District was over 1,000 people. It's staff is one of the largest and most sophisticated of any of its kind in the Nation. A complex nationwide permitting system would be very bureaucratic and nightmarish.

Finding solutions to the air pollution problem will require major industrial facilities to spend large amounts of capital. These expenditures must be justified over long time periods, something that a short term permitting will make difficult. The dampening effect on investments of these provisions might be substantial.

A second point relates to reasonable available control techniques, RACT. It defines S. 1630 in a new way. It is supposed to embody practical judgments about technology and economics, but is redefined therein as to require an 80 percent emission reduction regardless of cost.

The alternative to that requires reductions to the limit of feasibility, another term without precise definition. Basically, this provision uses a familiar term to impose what we believe is unclear and untried and maybe unworkable standards.

The third point relates to emission fees to be imposed at the Federal level. These programs must be funded, we admit. We feel the choice should be left to the States, not imposed by Congress. Some States and local agencies already have these fees. Others may choose a different source of income. But again, in S. 1630, it would single out only the major stationary sources from other area sources.

The fourth point again gets into the area of oxygen requirements in the bill. A 3.1 percent oxygen mandate would be a de facto mandate for ethanol. If a specified oxygen level is necessary, we believe a 2 percent oxygen requirement would meet the clean air needs, allowing all oxygenated fuels to be in the marketplace and provide flexibility in individual suppliers.

Lastly, in the area of gasoline volatility, the bill imposes reductions that could require vapor pressure of less than nine pounds. The Clean Air Working Group concedes that vapor pressure should be reduced to nine pounds, as long as time is given to ensure an orderly and efficient transition.

Reducing to less than nine could create driveability problems, particularly in some colder areas, and it may not be cost effective compared to other alternatives.

We have made a lot of comments in the written statements. We would be glad to elaborate on them.

But to conclude, I guess I would pose the old adage that if you think you don't have enough time to do something right, you will find that you will have to find the time to do it over. With that, we advocate an advanced planning program in parallel with active programs that will instill a sense of rigidity, planning and purpose with tight goals and timetables, but well thought out and not helter-skelter.

Thank you.

Senator **Baucus**. Thank you, Mr. Smith.

Mr. Ayres.

## STATEMENT OF RICHARD E. AYRES, SENIOR ATTORNEY, NATIONAL RESOURCES DEFENSE COUNCIL

Mr. **Ayres**. Thank you, Senator Baucus, Senator Chafee, members of the Committee. My name is Richard Ayres. I am the Senior Attorney at the National Resources Defense Council, but I speak today on behalf of the National Clean Air Coalition and its 31 national organizations, and millions of individual members.

I know the Subcommittee members share my hope that these hearings are a prelude to action in this Congress. The progress of the 1970's has given way to stagnation in the 1980's. Today, EPA lists 101 areas, home to 140 million Americans, suffering chronic smog pollution problems, and 44 nonattainment areas for carbon monoxide.

An NRDC analysis suggests that in many areas the actual number of violation days exceeds EPA's estimated exceedances by 50 to 100 percent. Exposures to 8-hour average concentrations of ozone that exceed the workplace standard are common. The reasons for this air quality emergency are many and varied, but basically they come down to the fact that the Nation's leaders have not pushed industry to adopt today's technology and engineering skill to achieve lower emissions.

Pending before you are two comprehensive revisions of the nonattainment program, S. 1630 and titles I and II of S. 1490. Of the two bills, only S. 1630, the Clean Air Restoration Act, appropriately responds to the present public health crisis. S. 1630 would restore the momentum we need to the national fight against smog. We think the pace of the program needs to be accelerated, however, to match the urgency of the problem.

The bill's comprehensive motor vehicle provisions are particularly encouraging. Cleaning up smog and responding to global warming will require a truly clean and fuel efficient car for the 21st century. The bill properly prohibits averaging schemes that weaken pollution control by allowing less than the best technology.

We strongly support S. 1630's two-stage approach to curtailing allowable auto tailpipe emissions. Some of today's cars, large and small, already meet these stringent standards. S. 1630 would require that all cars meet them in the 21st century.

We also strongly support the vehicle durability testing and other requirements of S. 1630 designed to assure that cars continue to perform in use as they do in emissions testing.

The bill also requires comprehensive transportation control plans. These provisions represent a genuine advance in the clean air debate, in our view, and deserve recognition. Traffic is now growing at 2½ percent per year nationwide, and as much as 4 or 5 percent in some growing cities.

This growth must be restrained, or the air quality improvements from motor vehicle emission controls will be overwhelmed by traffic growth.

The coalition strongly endorses the effort of the Committee to clarify the conformity provisions of section 176 of the law. This has the strong support of mayors, transportation agencies, and State airport program administrators.

We also support your effort to add the 20-year maintenance plan requirement to assure the air quality and transportation planning go hand in hand on the same schedule.

S. 1630 also requires real cleanup progress in our polluted cities and provides real penalties for failing to make progress. We want to mention several elements of that program that we see as particularly important. First, the requirement of an annual percentage reduction in pollution and nonattainment areas; second, mandatory sanctions applicable where plans are not adequate or not carried out; third the permit requirement; fourth, requiring RACT on sources below 100 tons; and fifth, NSR requirements made applicable to all new units.

Let me turn to the administration's bill very briefly. The nonattainment provisions of S. 1490, the Bush administration's smog program, are unacceptable weak, vague, unenforceable, and discretionary, in our view. The program does not require all polluted areas to revised today's failed cleanup plans. It provides excessively long deadlines applicable to too may cities, requires too few new pollution controls, repeals mandatory sanctions, and does not make the kind of reductions in auto emissions that are necessary.

We have listed a number of improvements which we believe need to be made to S. 1630. Since my time is short, Mr. Chairman, I will leave for the question and answer session more specific elucidation of those. I simply want to conclude by saying that the Coalition wishes to offer its help and support in passing S. 1630 and in improving it so that it will be the kind of bill that we need for the next century's air quality.

Senator BAUCUS. Thank you very much, Mr. Ayres. I will follow up and ask of you where, in your judgment, is the bill deficient? Let's just outline those right now.

Mr. AYRES. We have identified a number of points we think need to be improved. I think the primary overall description of our concerns is that in a number of respects it seems insufficiently urgent; it provides too long to get things done.

First, the deadlines for a number of cities seem to be too long to us. We believe only Los Angeles needs more than a decade to achieve the health standards. The Phase II of the motor vehicle standards would not take effect until the year 2003. We feel that should be done at least by the year 2000.

Some of today's cars are already meeting those standards.

Senator BAUCUS. Only on that point, if I could get the two of you to enter a dialog there—Mr. Smith, I heard you say that it is too fast. You said within your statement, to try to make something work too quickly, it won't work correctly, it will break, or something to that effect. Why do the two of you disagree? One wants to go fast, and one slower.

Mr. SMITH. I am not recommending that we slow things down. I am recommending that in addition to what we are doing, we overlay our current process with a planning process, a planning process that is enforced throughout, that in a logical, planning process looks at various techniques, various cost, much like what was done in San Francisco in terms of looking at it in a logical, planned, organized, not a helter-skelter kind of way.

Senator BAUCUS. Do you disagree with the deadlines that are in S. 1630?

Mr. SMITH. We believe in attaining clean air. We believe in attaining it in a rational, logical, thoughtout, effective kind of way. If that can be done in those time scales, yes. Some we think might, some we think might not.

Senator BAUCUS. So you take no position on the deadline dates?

Mr. SMITH. We are not taking any position on the dates as long as the process is a sound one.

Senator BAUCUS. More precisely, Mr. Ayres, why would you speed up the process?

Mr. AYRES. Your bill proposes to allow a number of cities 15 to 20 years to achieve the health standards. In our view, only Los Angeles should be given more than 10 years to achieve the health standards.

Senator BAUCUS. We gave 10 years to nonattainment areas in an earlier version, and it didn't make it. They thought that was just too unrealistic, too quick.

Mr. AYRES. I don't think that was the problem. The problem was that the cities were allowed to draw up paper plans, and then not carry them out. For the last 8 years, there has been no Federal leadership. One of the major problems in trying to get controls in place is that when the Federal Government is not pushing, the States find it very difficult to. So I think that the last 8 years' experience suggests the opposite conclusion from the one you suggested, Mr. Chairman. They suggest that you need clean air clear directives from the Federal level to get the program moving again.

Senator BAUCUS. Mr. Smith, the Office of Technology Assessment points out that you need at least a 50-percent reduction in emissions, let's say auto emissions while we're at it, to get attainment. Currently, we know how to get a 35-percent reduction. That is current technology. I think it is generally agreed upon to achieve a 35-percent reduction.

Is it your view that Congress should not enact technology forcing standards to force us as a country to reach that 50-percent reduction, or is it your view that we should not have technology forcing provisions and plan or do something until perhaps the technology is somehow available?

Mr. SMITH. Let me answer the question this way. I think the clean air problem demands and deserves the most creative juices that this country has. The most intellectual, intuitive, ingenious kinds of minds need to be put at the clean air problem. What we need to provide is an atmosphere that allows that to happen.

The kind of atmosphere that would not allow it to happen is to mandate the solution or to indicate the proper course to take at this time when it is not known. We need to allow and create an environment where new technology is created. Technology is forthcoming when the environment allows that to happen.

Senator BAUCUS. Do you agree with that, Mr. Ayres?

Mr. AYRES. I think the evidence points exactly the opposite way. The most successful technology forcing we have seen under the Clean Air Act is with respect to auto emissions. That happened, in my view, because the Clean Air Act demanded in unequivocal terms that the technology be developed.

At that point, the best engineering minds were put to work on the problem, and they developed a new technology. Elaborate statutory planning and research directives assure a problem will be put on the back burner. I think that lesson is very clear.

Senator BAUCUS. What about that, Mr. Smith? That point is often made, that if you give people time—it's one of Murphy's laws—people will fill it and nothing happens.

Mr. SMITH. I agree that there should be a sense of urgency, a sense of purpose, and what form that should take, I am not really saying. I just think it would be wrong to predict or edict the answer without allowing the best minds to solve the problem. I am not suggesting time extensions, and I am not suggesting delays.

Senator BAUCUS. Are you prepared to support any specific measures at all?

Mr. SMITH. In S. 1630—yes. We talked about a few and there are others. Most specifically, the——

Senator BAUCUS. What about control measures? Are there any specific control measures in the bill that you support?

Mr. SMITH. Yes, there are. We support the notion of reformulated gasoline, alternate fuels, looking at the auto/fuels as a system, the setting of attainment standards, dividing the Nation into parts, all of those things—yes, we agree with them.

Senator BAUCUS. I apologize to both of you witnesses, there is a vote going on now, so I am going to have to temporarily recess this hearing. Senator Chafee will be back very quickly, and he will have questions, and he will chair the hearing for a period of time.

Thank you.

[Recess.]

Senator CHAFEE [assuming chair]. We will get started again.

Mr. Smith, first of all we want to pay tribute to your company for what it has done. It seems to be that we ought to get a lot more planning done before we plunge into some of these strenuous efforts and the restrictions. For example, on page 36, I note you said there is no evidence that OCS facilities have impacted onshore air quality.

We had a whole series of witnesses this morning, I don't know whether you were here, that testified to the opposite. We all believe in planning, but we also believe that there comes a time when we have to take action. Do you have any idea how long your planning program would take, and what it might cost, and finally, who do you think ought to pay for it?

Mr. SMITH. Let me try to answer those things. First, I am not recommending that the planning be done in series with the actions that are currently in place, things that are in the hopper to do, to solve the problem. We are recommending, rather, that we start a planning process in parallel with what is going on today so that we can engage the results of that planning process in an action.

So it is a development of an action plan. Our recommendation is that it begin as recommended in S. 1630 with inventories, a collection of inventory data, the creation of air models through individual air basins, those kinds of things—resolution of a lot of issues, canisters and Stage II—a lot of things that have been hanging over our heads and debated. Those kinds of things need to be sorted out rationally and cost effectively and laid out.

I don't know what the answers are going to be and in all instances, I don't how long a planning process will take. But as clean air becomes more difficult to achieve and more expensive, it is just mandatory in my thinking that we have a rational process laid out for dealing with those issues.

Senator CHAFEE. One of the points you make is that ozone levels vary; the summer of 1988 it was terrible, another summer it was not so bad, the weather is certainly a major factor—we accept all that.

Nonetheless, there is a line I think we can follow that shows that conditions overall are worsening. We have the Northeast States testifing, as you recall, that they are bringing down the VOCs in the gasoline, and for them, it was effective, how much they are not sure, but it is a step forward.

It seems to me—I don't want to be harsh—but it seems to me there can always be a reason not to do a thing, not to proceed because we don't know exactly what the results will be, the costs attached to every effort; they figured the costs of the gasoline went up somewhat. Although they shrugged that off. As a resident of that area, I don't think we look on our gasoline as being any higher or lower than anywhere else.

So it seems to me that we really have to get going on these matters. Do you have any comment on that?

Mr. **Smith**. I agree that we need to get going. But there is a process that we need to get going with. That process needs to be laid out, thought out, and designed and engineered in a logical process. It should not be a random, helter-skelter solution to the problem.

Senator **Chafee**. What do you say to all this, Mr. Ayres?

Mr. **Ayres**. I am struck in the argument for planning by the lack of credit being given either to the planning requirements in your bill, or to the planning of the last 20 years. After all, we are not coming to this problem brand new. We have had a program in place for 20 years that required planning, and thought. Every State has an agency, sometimes cities do, whose business it is to think out a program and do it. I think it's a little late in the game to come forward and discount all that, and say we should start over again, and also to discount the real planning requirements in your bill.

Senator **Chafee**. After all, that's what SIPs are all about, isn't it? If you take that group in Southern California, they put an awful lot of time and energy into planning. The mayor of Denver testified this morning that his city had spent a million dollars on plans. He indicated that many other major cities had done likewise.

You've got to get on with it. I know you agree with that, but still it seems to me that the gist of your testimony is let's step back and do some more study. Is that too harsh?

Mr. **Smith**. I am not saying to step back. I am saying let's do better planning.

Senator **Chafee**. I didn't mean to step backwards, I mean to step aside, if you will.

Mr. **Smith**. Right. Let's start a process over here that takes all the data, lays out all the data, looks at the rational process for how we make decisions. Some air districts have very good planning processes, and you have named some. But some do quite a bit better than others. They have better processes. They have the Urban Air Model in Los Angeles which is a tool that is unique, basically, to that area. It is not widely used. Should that be a requirement in other areas? There is a lot of knowledge that could be applied in a logical process that we think in a parallel kind of activity ought to be pursued.

Senator **Chafee**. I was struck by Mr. Ayres' testimony when he stated that all this started in the early 1970's, which is nearly 20 years ago, and the endsight in this is the early 2000s. That makes 35 years and that's a pretty good Senate career, for anybody.

Thank you both, very much. We appreciate your thoughtful testimony and we will undoubtedly be talking with you more as we go along.

Mr. SMITH. Thank you, Senator Chafee.

Mr. AYRES. Thank you, Mr. Chairman.

Senator CHAFEE. The final panel includes Dr. Harvey Alter of the U.S. Chamber of Commerce, Bruce Chiles of Chiles Oil, representing the Petroleum Marketers, Mr. Larry Feldcamp, of the Texas Ozone Task Force, and Mr. Ralph Engel, President of Chemical Specialties.

We will start with Dr. Alter.

## STATEMENT OF HARVEY ALTER, U.S. CHAMBER OF COMMERCE

Mr. ALTER. Thank you, Mr. Chairman. I am Harvey Alter, I am with the U.S. Chamber of Commerce, and my written statement deals with some issues that are important to both our large and small business members.

Inasmuch as most of our 180,000 companies that are members are, of course, small businesses, I would like to stress points that pertain particularly to them. For example, in S. 1630, there is a requirement that a revision to a State implementation plan include that an owner-operator of a stationary source perform an actual inventory reads now—regardless of source size.

That would mean all small businesses would have to monitor their emissions, something certainly well beyond their ken, and, in many, many instances well beyond their pocketbook.

There is no provision to estimate, there is no provision to assist, and some of these business may not even know where to start. Picking up on the sense of urgency of the last panel, if we proceeded with the bill's current wording, I suspect this section would delay the clean air process as small business people scurry to learn what has to be done.

In fact, the inventory requirement in S. 1630 is more burdensome than section 313 of CERCLA, which permits estimates of toxic emissions, and in S. 1630 we are talking about monitoring of the non-toxic primary air pollutants.

It is important for small businesses there be a change in the section 101(c) of S. 1630 addressing are a boundaries that permits expansion of those boundaries designated as nonattainment beyond the SMSA. First of all, we think that any expansion of boundaries should require the installation of additional monitoring stations, not just result from a geographical designation on a map.

Furthermore, we feel that expansion would encompass some areas in which small businesses will wake up one day and find that they are in a nonattainment area and will have to comply with new requirements almost as a surprise.

Certainly, we could turn to the local and State planning agencies for help and early notice, but the small business community cannot rely on that, nor can they constantly go running after these planning agencies at their own initiative.

An area of this bill that affects some small businesses that is ambiguous is the employers' transportation plans. I point out in the written statement that anybody with 100 employees or more would be subject to the $50 per month per parking space fee, rather than just those that may have 100 employees in one location.

As an example, a particular member of ours, doing $15 million a year business, is located in four States. They have more than 100 employees, but not more than 100 in any one location. Some of the locations are rural and the few workers must rely on their cars. I hope that the draft of S. 1630 did not mean that anybody with 100 employees would be subject to the $50 fee, but rather only those with 100 employees at one location.

Finally, for both our large and small members, I would like to comment on the consumer product descriptions. I do so with what I think may be a unique background at this table; I have worked in the field. I am a chemist, and for many years, I worked for one of the leading personal care product companies. I was the technical director of research for one of the divisions, so I have more than a passing knowledge of the formulation of consumer products.

There is a tremendous amount of science, engineering and art in the formulation and testing of a product and development of its package or delivery system. I fear that no matter how hard EPA (or any other Government agency) tries to understand product formulation, this subject is not their prime business, they will not have accumulated experience. A Government agency is the wrong organization to try to lead an effort to reformulate consumer products.

Now, at the same time, I think we have to question whether consumer product reformulation is the place to look for emission reductions. Are we looking where the light is better, or do we really want to look where it is going to make a difference in our air quality? I elaborate on this point and on the part of S. 1630 that calls for fees on consumer products in my written statement. We submit most strongly that any unfettered permission for EPA to impose a product fee is wrong. Our reasons are given in the written statement.

In conclusion, we hope that the small business problems can be coped with by appropriate changes in the bill. Just a week ago, in testimony before this subcommittee, a method of doing this was outlined. In testimony on behalf of the Clean Air Working Group a suggestion was made (and we think that suggestion is a very good place to start) that in order to have the small business community comply, they must participate in the planning and assistance efforts.

Thank you very much.

Senator **Chafee**. Thank you, that is constructive testimony.

Mr. Chiles.

## STATEMENT OF W. BRUCE CHILES, PRESIDENT, CHILES OIL CO., AND PRESIDENT, PETROLEUM MARKETERS ASSOCIATION OF AMERICA

Mr. **Chiles**. Good afternoon, Mr. Chairman. My name is Bruce Chiles. I am President of Chiles Oil Company in Pulaski, Tennessee.

Senator **Chafee**. How is business?

Mr. CHILES. Great. I am here this morning in my capacity as President of the Petroleum Marketers Association of America. PMAA represents approximately 11,000 small, independent petroleum product marketers throughout the United States.

For the most part, we petroleum marketers operate family businesses. Many companies have been in business for 50 years or more, and are in their second, third or even fourth generation of family leadership. As a result, there is a strong sense of continuity among petroleum marketers, and a desire to perpetuate a sound, socioeconomic and ecological environment, where they and their heirs will be able to operate well into the future.

PMAA commends the President and the key leaders of Congress for their willingness to move forward on these critical issues. To the extent we disagree with specific recommendations being made, or prefer alternative solutions to the problems presented, it is our way of trying to be a constructive part of the overall policy debate on the matter.

No industry nor any segment of an industry can avoid its responsibilities in cleaning up the environment. Likewise, no industry or segment thereof should be asked to bear a disproportionate share of the burden.

With this in mind, PMAA makes the following observations concerning different issues which make up the Clean Air Act debate.

PMAA supports efforts to recover fueling emissions at service stations and running losses from idling engines through the installation of on-board carbon canisters on new automobiles. We believe on-board canisters provide the best technology, both as a means of reducing hydrocarbon vapors during refueling, and as a nationwide solution to the benzene emission issue.

PMAA strongly opposes Stage II vapor recovery as a means of addressing refueling emissions because it is ineffective, it has a high level of consumer resistance, it is costly, it is difficult to enforce, and it is expensive to install and maintain.

Proponents of Stage II argue that it can serve as an interim measure pending the turnover of the automobile fleet to cars with on-board systems. Considering the time involved, and the revision of State implementation plans, the local permitting process and contractor and equipment availability, it is difficult to fathom that Stage II can be considered an effective interim measure.

In addition, it places an enormous financial burden on petroleum marketers who will have to spend more than $30,000 per station to install technology which will essentially be obsolete in a few years.

Another key issue is the use of alternative fuels. PMAA supports the development of a low-emission system for future vehicles and future fuels, provided that clear standards are established for both vehicles and fuels which allow a level playing field for all competing vehicles and fuels.

We remain concerned about the apparent pro-methanol bias within the administration, and these concerns are detailed in my prepared remarks.

We are also concerned about the revisions in S. 1630 which mandate 3.1 percent oxygen content during winter months in carbon monoxide nonattainment areas. This is a de facto ethanol mandate in those areas.

Of equal or greater concern is the oxygen credit trading program which could become a marketer's nightmare and a bureaucrat's dream. PMAA supports a reduction in the sulfur content of not only diesel fuel, but also for all distillate fuels. Reducing the sulfur levels in all distillate fuels will provide additional environmental benefits, increase the useful life of diesel engines, and residential heating equipment, and avoid the cumbersome and costly requirements of dyeing and segregation of fuel.

Finally, PMAA supports an across-the-board reduction in the summertime Reid Vapor Pressure to 9 pounds per square inch [psi] as well as an effective automobile inspection and maintenance program.

I thank you for the opportunity to appear and I look forward to responding to any questions you may have.

Senator CHAFEE. Thank you, Mr. Chiles, for giving us those helpful thoughts and suggestions.

Mr. Feldcamp.

## STATEMENT OF LARRY FELDCAMP, CHAIRMAN, TEXAS OZONE TASK FORCE, ACCOMPANIED BY ALLISON PIERCE, VICE-CHAIRMAN, TEXAS OZONE TASK FORCE, DIRECTOR, HARRIS COUNTY POLLUTION CONTROL DEPARTMENT

Mr. FELDCAMP. Thank you, Mr. Chairman. My name is Larry Feldcamp. I am testifying as Chairman of the Texas Ozone Task Force. With me is Allison Pierce, Vice-Chairman of the Task Force, and Director of the Harris County Pollution Control Department.

The Texas Ozone Task Force is a public-private partnership, which includes the Greater Houston Chamber of Commerce, the city of Houston, and Harris County. The Texas Air Control Board and the Houston Regional Monitoring Corporation serve in an advisory capacity.

We are proud of the aggressive efforts we have made in attacking the ozone problem. No one in Houston wants to violate the ozone standard, but despite more than 15 years of effort, exacting hundreds of thousands of tons of emission reductions, ambient ozone concentrations have not responded with the projected results.

Because the Houston experience with nonattainment, the Task Force believes that S. 1630, while it offers a framework that can be modified for progress on ozone nonattainment, needs to be changed to assure that this progress is not seriously adverse to the future of the American economy and American competitiveness.

We believe that future ozone nonattainment programs must build on past understandings. The questions that were asked earlier, I think, call attention to what we believe is a very complex, complicated issue, the ozone attainment issue. The technical answers and the means for attaining the standard are part of the problems of why we have not attained it over the past 15 to 20 years.

We know more today than we knew in 1982, when we last developed an implementation plan. For instance, this year we have learned that the magnitude and nature of mobile source emissions is different than we had previously thought. More is being learned about stationary source emissions. While all of this information is useful, unless far more is done to research the nature of ozone formation, we will be constrained to follow a control strategy that has so far failed.

Our written testimony presents a number of comments regarding various elements of S. 1630. We believe our experience can assist in formulating solutions to the ozone question which can benefit the environment and the Nation. We offer our assistance to the Committee and its staff as further deliberations occur.

Today, I want to concentrate on three points. These are the failure of the bill to address the underlying theories on ozone formation, offsets, and netting.

S. 1630 needs to include a study of the role of VOCs and $NO_x$ on ozone formation. Over the past decade, Houston has acquired more data on ozone than any other area of the country. Based on this experience, we believe the current ozone control strategy is seriously flawed.

In part, the strategy fails to account for ozone exceedances which result from situations other than the classic ozone formation assumptions. In part, it has failed to produce ozone reductions in spite of significant VOC reductions, even under the classic ozone formation situations.

The Task Force supports the inclusion of a study in this bill similar to the study in S. 1490, but it believes that the minimum elements should be expanded.

With regard to offsets, it is our view that offset ratios in excess of 1.2 to one, given all the other requirements of the bill, would result in termination of new construction.

This bill includes several elements that directly change the emissions offsets options available to new and modified sources. New sources of small size will be subject to new source review. Offsets will be increased. RACT will be applied to virtually all sources. Area sources will be controlled. Taken in combination, these various steps will essentially eliminate any excess pool of emissions that can be used for offsets.

These steps are significant with regard to the effect they can have in reducing the Nation's ability to site new manufacturing operations. But they can be of even more consequence with regard to existing operations depending on how netting is altered. The bill prohibits the option of netting for existing source modernization.

It is time to realize that the future is the issue, not the past. Companies are relying on netting to make modernization changes, changes essential to remaining competitive nationally and internationally, essential in some cases to meet new environmental requirements. Provisions in the bill apply the new source offset requirements to existing source modernization.

Because other provisions of the bill would reduce available emissions that could be used for such offsets, modernizing would not be feasible or it could only occur with capacity loss. For industries that must retool on a recurring basis, the effects would be more significant and felt much earlier.

Congress must recognize that its decisions in this crucial area are not bounded by the best choices to pursue attainment of ambient air quality standards. These choices may well define the industrial siting policy for the Nation well into the next century, and by doing so, determine the position of this country in international competition.

Senator **Chafee**. Thank you, Mr. Feldcamp, you did very well. Mr. Engel.

## STATEMENT OF RALPH ENGEL, PRESIDENT, CHEMICAL SPECIALTIES MANUFACTURERS ASSOCIATION

Mr. **Engel**. Good afternoon, Senator Chafee. My name is Ralph Engel, and I am President of the Chemical Specialties Manufacturers Association, CSMA.

CSMA has a membership of more than 400 firms engaged in the manufacture, formulation, distribution, and sale of a whole host of products for household, institutional, and industrial use.

In addition, CSMA also represents a consumer coalition of industries concerned with the regulation of consumer products which include soaps and detergents, cosmetics, toiletries and fragrances, as well as companies who produce ethical and over-the-counter pharmaceutical products.

Both of the nonattainment bills now before this Committee contain provisions for the regulation of volatile organic compound emissions from commercial and consumer products. Regardless of what has been written and said on the subject, it is impossible at this point to know how to approach these very small sources of emissions with any certainty or knowledge of whether it is feasible to attempt to control them at all.

Commercial and consumer solvents are an entirely new and unique subject for clean air regulation. It is a category that should not be dealt with by traditional approaches or control strategies, its contribution to ozone is not at all clear.

The products contemplated in proposals to regulate emissions from commercial and consumer products cover a universe of uses, encompassing more than 700,000 products in total. They include personal care products such as shaving cream, mouthwash, deodorant, shampoo, and on and on. Home care products such as window cleaners, furniture polish, floor wax, kitchen cleaners, auto products such as antifreeze and windshield deicers, and vital health care products such as disinfectants, sterilants, insecticides, and medicines.

These products cannot be viewed in the same way as traditional emission sources. The Clean Air Act, up to this point, has regulated waste emission, and not front-end consumer products created for the benefit of society. Instead of controlling valueless waste, regulation will be directed at products which themselves, because of their present composition, provide important societal and health benefits.

Most consumer products are marketed nationally and rely upon the freedom of movement traditionally and constitutionally accorded to interstate commerce. If anything should move freely in the marketplace, it should be these many products, which are such an important part of modern life. There must be consistency of regulation in the national marketplace.

We believe that there are several areas in this legislation in which improvement is most necessary. Both bills provide a 2-year study. During this period, EPA is directed to study and analyze the subject of emissions from consumer products. We believe this period is insufficient.

The Congressional Office of Technology Assessment, OTA, in its recent study, noted that very little is known about either the ozone contribution or control technology for consumer products. For this reason, OTA excluded consumer products altogether from its emissions reduction potential and cost analyses.

CSMA believes it is unrealistic to expect that this factual vacuum can be filled in a 2-year period. A Federal court in New York recently agreed. It found, in reviewing a State implementation plan revision proposing regulation of certain consumer products the court agreed with the New York State Department of Environmental Conservation's assertion that no valid data existed to regulate these products. In fact, it further agreed that a 4-year study would be required.

There are no facts before this Committee which suggest that the New York court was wrong in its assessment. CSMA believes that the best approach is to first develop a proper protocol and then do a thorough evaluation. At the end of the study, if the Administrator finds that regulation of VOC emissions of any and all consumer products is warranted and feasible, then such regulations can be promulgated.

Statutory language which requires regulations regardless of the outcome of the study, such as in S. 1630, prejudices the study up front by prejudging the results before it is even conducted.

Fees are not an acceptable control strategy for consumer products like they would be for waste-end sources.

The same criteria for additional State regulation which exists in current law for motor vehicles should apply to consumer products as well, with regard to the marketing across State lines.

Consumer products should not be included under the definition of stationary source. They are unique unto themselves.

Finally, CSMA is concerned about a provision in S. 1490 in which States are denied credit for emissions reduction achieved by a mandated reduction in the Reid Vapor Pressure of gasoline or by vehicle tailpipe or evaporative emission measures. Artificial limits on a State's ability to claim credit for emissions reduction without equivalent reductions in emissions inventory, unfairly inflates the emissions reduction burden to be borne by other regulated entities and industries.

We appreciate this opportunity to present our views concerning the appropriate strategy to establishing a Federal scheme for addressing regulations of consumer products as part of the plan for achieving ozone attainment.

Mr. Chairman, I would like to ask that my full statement be part of the record, if possible, as I have summarized this one.

Senator BAUCUS. Thank you very much, Mr. Engel. How in the world are we going to exempt small sources—some of the entities that you are talking about—if we don't exempt other small sources? What I am getting at is this: we have a major nonattainment problem. If we are going to solve it, everybody is going to have to pitch in.

Once we start exempting one group, this group or that group, or whatever group, because they are small, or it might be a little bit difficult, then every other group can make that same claim, that they too should be exempt, or there is a little bit of a burden on them.

For example, the auto industry says, "well, we shouldn't go with Round II, because the movement from Round I to Round II is not a large percentage reduction in emissions"—comparing Round I with Round II. So if we agree with that claim, it seems to me we have to agree with virtually every other claim. That is, we are getting to the point now where there is no one specific action that we can take that gets at the lion's share of the problem. We have to deal with lots of small sources, lots of emissions in lots of different areas, on a very comprehensive basis, if we are going to get the job done.

So why in the world should we exempt the folks you are talking about?

Mr. ENGEL. Mr. Chairman, we are not suggesting that you exempt us. We are the new "kids" on the block. We surfaced last year for the very first time as part of a Clean Air bill. That is the Consumer Commercial Products area. There is no data to support any action at the moment. We are saying to you and to this Committee, for God's sake, if you are going to include us, let's find out what the inventory of some 700,000 units of products include. Let's find out what they are contributing to the ozone nonattainment level.

Senator BAUCUS. This bill provides for that. It provides for inventory.

Mr. ENGEL. Not in two years, Mr. Chairman. It is going to take over a year to do an inventory of this magnitude. We basically are saying, let's do this job right, let the Administrator then have the authority to decide what can and what cannot be regulated, or should and should not be regulated, based on the technological and the commercial feasibility of dealing with these products, instead of acting prematurely with the chance of wiping out wholesale numbers of products or categories.

We are not suggesting that we are not part of this process. We are not suggesting that you exempt us.

Senator BAUCUS. You say this bill will wipe out wholesale numbers—such as?

Mr. ENGEL. Segments. Well, let's take mouthwash. Mouthwash is practically all VOC.

Senator BAUCUS. So?

Mr. ENGEL. So that means that would be gone. That is an example of a VOC.

Senator BAUCUS. We have found other substitutes. Very frankly, I don't know a lot about them.

Mr. ENGEL. There are many over-the-counter medications or pharmaceuticals that have VOCs as solvents.

Senator BAUCUS. But the point is that we have found substitutes in those areas. One example that comes to mind is chlorofluorocarbons. We are banning the production of chlorofluorocarbons in this country. We are going to find substitutes.

Mr. ENGEL. Mr. Chairman, we have a significant background in chlorofluorocarbons and their technology. We handled, the removal of chlorofluorocarbons from aerosol products in the early 1970s. When finally they were removed by regulation in 1978.

Senator BAUCUS. That is correct.

Mr. ENGEL. There were substitute propellants that existed to take the place of CFC's then. But it still cost a billion and a quarter dollars in reformulation expense over four and a half years of time and some 10,000 jobs lost as a result of it, and many products as well.

I am not suggesting to you, nor do I want to suggest to you, as an industry, that we should not be fair and part of the solution to——

Senator BAUCUS. Have we not banned CFCs in aerosol cans?

Mr. ENGEL. Yes, EPA has.

Senator BAUCUS. We should have done that.

Mr. ENGEL. No one suggested otherwise. We are not suggesting that you go back to look at that. But you need to look at some of the economics behind what happened and at some of the time frames to understand what transpired, this Committee doesn't have any data on which to really suggest that a 2-year study is appropriate.

Senator BAUCUS. Mr. Chafee.

Senator CHAFEE. Mr. Chairman, I have to go but I wanted to get in one quick question if I might, to Mr. Chiles.

That is, sir, the Stage II concerns you evidence. We have seen California, I don't know whether you were here this morning and heard the gentlemen from St. Louis say that yes, there was some kicking and screaming but it is in effect, and these are all elected officials who have to respond to their constituents. They have successfully implemented Stage II. Does that not seem to indicate that Stage II not only can be implemented but the customers will respond to it successfully, and willingly, or at least accept it?

Mr. CHILES. Marketers that I know in California will tell you the opposite of that regarding consumer acceptance, particularly where they have an alternative, where they can go across the State line. They will seek the easier place to trade at.

Senator CHAFEE. Are you serious in saying that? I don't want to be harsh, but are you saying somebody will drive 5 or 10 miles because they don't want to use the Stage II hose to fill their gas tank?

Mr. CHILES. I will tell you that has happened in Washington, DC.

Senator CHAFEE. Now wait a minute. In Washington, DC, there are a lot of reasons people go outside of Washington, DC, other than Stage II. Come on, I won't buy that one. I am a consumer. One of them is the difference in the price of gasoline.

Mr. CHILES. I will tell you that Stage II is more difficult to handle than what we have out there today.

Senator CHAFEE. Well, that's right. I can remember when self-serve gasoline was rejected in this country. Indeed, in our State they passed a measure that you could not have self-serve gasoline because it was so dangerous, you were going to set the place on fire. So all of this came about in the past 20 years, where you serve yourself. But that's totally accepted now. There are darn few people who will go to the full serve aisle for their gasoline. So I really cannot believe that this is not accepted. As I said we had the witnesses here today, elected officials.

Mr. **Chiles**. I think more importantly, Stage II is not entirely effective. You will even find from EPA's own studies on this issue, they have found that Stage II was only cost effective where it was already in place, it was not cost effective on the recovery per ton of emissions, where you have to put it in later on, it was not compared to on-board canisters. That is the major thrust of our contention, that it is not a cost effective issue as far as the public is concerned. The public does have an issue with the handling of the hose. I don't know if you can accept that or not.

Senator **Chafee**. Unfortunately, I have to go. Thank you, Mr. Chiles.

Senator **Baucus**. Thank you, Senator.

Mr. Chiles, I don't quite understand. What is the main point? If Stage II is not cost effective—I don't understand what you are saying.

Mr. **Chiles**. About a year ago, EPA had a white paper, where they were going to come out and recommend on-board canisters for this country. It never did get issued, unfortunately. In that paper, they concluded that Stage II vapor recovery in this country was not cost effective, other than where it was already in place, and that would be Southern California at that particular time, to my knowledge. If you look at our comments and remarks that I have given you, we quote those figures in there on something like $3,000 or $4,000 per ton.

Senator **Baucus**. I have them right here, you have $800 to $3,600 per ton of hydrocarbon.

Mr. **Chiles**. That's correct.

Senator **Baucus**. How did you arrive at those figures?

Mr. **Chiles**. Those are figures that were provided by EPA studies.

Senator **Baucus**. I understand that in California it is about $600 per ton of recovery.

Mr. **Chiles**. I don't know where you are getting those figures, Senator.

Senator **Baucus**. From California.

Mr. **Chiles**. Well, your own EPA's figures are there.

Senator **Baucus**. These are EPA's?

Mr. **Chiles**. Yes, your Government, and mine too.

Senator **Baucus**. OK. So you have done no independent assessment to determine the validity of the assertion that Stage II costs per ton are between $2,800 and $3,600?

Mr. **Chiles**. Not in the recovery process. We have done independent studies on the costs of installation, but not on the recovery costs.

Senator **Baucus**. OK. I don't mean to get into a debate, but I see Mr. Ayres sitting behind you. Mr. Ayres, could you come to the table and comment on some of this too? I believe in the John Locke marketplace of ideas, that is where we can debate something, the greater the likelihood that we will get some truth.

Mr. **Ayres**. Thank you for inviting me to the marketplace of ideas, Mr. Chairman.

Senator **Baucus**. Are you familiar with California's figures?

Mr. AYRES. I am familiar with the figures that the EPA developed when it was analyzing the Stage II on-board controversy. As you know, that has gone on for nearly a decade now. Another example of paralysis through planning. My understanding, based on that analysis, is that both techniques would be considered highly cost effective by comparison to controls on lots of different kinds of stationary sources. Both were well under $1,000 a ton.

Senator BAUCUS. Both being what?

Mr. AYRES. Stage II and on-board.

Senator BAUCUS. OK.

Mr. AYRES. And on the basis of those figures, we have argued for a long time that both technologies should be applied. If it were determined after the entire auto fleet was equipped with on-board that Stage II was not adding an amount sufficient to justify its use, then it could be retired.

After all equipping the auto fleet with on-board controls is a 10-year process, because it takes a full fleet turnover. So both "on-board" and "Stage II" seem cost effective in our view; both should be applied; and one can be retired, if we desire to, later on.

Senator BAUCUS. What is your basis for the assertion that Stage II is cost effective?

Mr. AYRES. EPA analysis during the last several years.

Senator BAUCUS. Wait a minute. One says that EPA documents cost effectiveness, one says that EPA documents cost ineffectiveness. How are we going to resolve this?

Mr. AYRES. Resort to the EPA documents. I am not familiar with documents that indicate $3,000 a ton for Stage II costs, although I know the Agency has gone round and round on this issue over the last 10 years, and may have expressed a number of different opinions in this issue.

Mr. CHILES. Senator, we would be happy to provide the EPA study that we used.

Senator BAUCUS. Well, I was going to ask you both to do that.

Mr. CHILES. In the 1987 proposed rules were where our numbers came from.

Senator BAUCUS. OK. Well, I would like each of you, though, to provide the documentation as best you can for your belief, your separate beliefs that Stage II is either effective or ineffective.

Mr. CHILES. We would be happy to do that.

Senator BAUCUS. Thank you. I don't want to belabor the point I was making to you earlier, Mr. Engel, but you said you are in a whole new ball game here. I think this whole country is in a new ball game.

Mr. ENGEL. Understood.

Senator BAUCUS. If we are going to solve this, we are going to do this together.

Mr. ENGEL. I can't quarrel with that at all, Senator. All we are asking is to let us solve our problem based on some real data.

Senator BAUCUS. Do you have any views on the consumer products contribution, Mr. Ayres, costs and all that?

Mr. AYRES. I do. I question somewhat the "whole new ball game" assertion, Senator. A number of State plans, I think New York is an example, included controls of this sort as part of their State plan ("SIP") some time ago. One of the reasons for our present excessive pollution levels is that a number of those State plans were not carried out. The New York plan is an example of that.

So it is not as if the idea of controlling emissions from such sources has suddenly occurred in the last year. It is an idea that has even been written into federally approved State SIPS over the last decade. Controls have not always been carried out as they should have been, but they should hardly be news to the affected interests.

This industry that formulates these products is not receiving notice for the first time since your bill was written, or since recent bills have been written.

Senator **Baucus**. Mr. Engel.

Mr. **Engel**. Mr. Chairman, my comment was that we are the new kid on the block, and we have appeared in the Clean Air Act Amendments for the first time. I truly believe that is the case.

Senator **Baucus**. What about these other State efforts?

Mr. **Engel**. There were a couple of State implementation plans that included them but no one did any studies to determine what impact they made and what the inventory was, and whether they contributed to ozone formation. Therefore, the data does not exist.

What concerns us is that we are going to go ahead and mandate regulation prior to the—even before a study is done, and prejudice the study in advance without taking the time to find out whether we are indeed a contributor and to what degree. if we are, and if it determined to what degree, and it should be, if it is done correctly, then I think rational regulations can be instituted and we would accept that responsibility.

Senator **Baucus**. I understand small sources appeared in the 1987 EPA studies also, as contributing to urban smog, lower atmosphere ozone. So there have been lots of earlier indications that this is a problem that would have to be dealt with. We have to begin somewhere in a legislation.

Mr. **Engel**. I understand that. As I said earlier, Mr. Chairman, it is not our intention to duck the issue. That is not where we are coming from. Our intention is to do it right. Not to prolong it, but to do it right.

Senator **Baucus**. Mr. Feldcamp and Dr. Alter. I apologize that I was not here for your statements. Is there anything you would like to add to this general debate, with particular respect to your area's concern?

Mr. **Alter**. I would, Senator, like to add an observation more from my background and training in science than from some of the other subjects we are here to discuss. I am struck that in this entire debate we have so many conflicting views regarding what you and Mr. Engel were discussing.

There is a belief that we have identified a new source of emissions and legislation will be able to control it. I feel, as my members do, that pertinent data are lacking. Earlier today, as Mr. Ayres was saying, we have studied clean air long enough. But as Mr. Feldcamp stated, after 15 years of intensive study—we still can't achieve clean air. The models are inadequate. We know that some of the models lack data. We know some of the models are inadequate even with a lot of data. These are the experiences of the country.

We know that the best laid plans of mice and men often go astray—and in clean air they have. There seems to be a belief in this country that we all lack the wisdom or the will to do a SIP, run a model and clean the air. Indeed, we often lack the wisdom; never the will.

I can't help but wonder, and I am sorry I didn't think of this several days ago, if there aren't more specific suggestions, how do we build in some kind of legislative flexibility to allow for intellectual inadequacies. How can we build on trying a new idea and seeing if it works; admitting if it does not; seizing on the opportunity if it does; and admitting to ourselves that we have to go after new sources, new techniques, and new definitions? We need all. But at least we must exercise our minds and try new ideas and new approaches.

Earlier today, in the discussion concerning technology forcing, it was amazing that we require ourselves as a society to put so much stress on technological experimentation, but we do not allow ourselves that same kind of flexibility or expansion of our thinking, our method of planning, and our methods of execution to achieve clean air. Rather, typically, we have forced ourselves into narrow legislative and regulatory vents.

Sir, I think after all these years we have to admit that as planners, scientists, as businessmen, perhaps even as legislators, and certainly as regulators, we are woefully ignorant. Maybe that is why we are all sitting here struggling with the clean air problem.

Senator **Baucus**. You make a very good point. I think you would also agree that this world is run by deadlines. You have to set deadlines or things tend just not to happen. That is something that I have learned by hard experience.

Mr. **Alter**. But we don't know what we are doing, and that is how we ran headlong into the deadlines we set for 1987. If we do set deadlines, why not set the deadline but say, OK, here, add another category to the bill. Add a category for those that may want to experiment a little, who may want to superimpose some new information on say ozone formation. Let there be the exception for innovation, and that exception is not an exception to delay, but could very well be an exception to accelerate.

Senator **Baucus**. Mr. Feldcamp.

Mr. **Feldcamp**. You should have penalties or sanctions for failure to try or failure to develop or implement a plan, but failure to attain or to meet these percent reduction requirements on an annual basis, when the technology may not be there, or the needs——

Senator **Baucus**. How are we going to measure trying? How are you going to quantify trying, is there some objective basis on which to decide whether the trying is met?

Mr. **Feldcamp**. Each area will try various kinds of control measures based on a plan to meet the requirements of the Act. But if an area doesn't attain the standard, and has made the emission reductions, it should not be sanctioned. I would challenge anybody to say that we have not implemented controls. But we have not reduced the ozone. That's the question. That's the issue, the bottom line.

Senator **Baucus**. Well, we have two choices. We try or do nothing. I think we should try based on the evidence and the information that we have, go forward. If it works, great, if it doesn't work, we modify, adjust, make some changes, as we have done in the past.

Mr. **Feldcamp**. I would agree with you, Senator, on that, but we shouldn't get sanctions if we don't attain the standard. Some of those requirements in there——

Senator **Baucus**. Let's go ahead and see what happens. This Congress, I think, gentlemen, is more reasonable than it is unreasonable. At least everybody here tries to do what the people back home want them to do. And Congress will meet another day, to make adjustments. So I think—this is democracy, folks. That's the way it operates.

It reminds me, Winston Churchill said of all its fits, and starts and delays—this is a gross paraphrase—inefficiencies, and so forth, it is absolutely the world's worst form of government, except there is none better. That's what we have.

OK, did anybody say anything so outrageous this morning or this afternoon that any of you want to follow up?

Ok, thank you. Hearing is adjourned.

[Whereupon, at 3:31 p.m., the subcommittee was recessed, to reconvene the following day, Thursday, September 28, 1989, at 9:00 a.m.]

[Statements submitted for the record and the bill S. 1630 follow:]

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TESTIMONY
OF

GOVERNOR NORMAN H. BANGERTER

before the

COMMITTEE ON ENVIRONMENT and PUBLIC WORKS
SUBCOMMITTEE ON ENVIRONMENTAL PROTECTION
U. S. SENATE

regarding

THE CLEAN AIR ACT AMENDMENTS OF 1989

September 27, 1989

Mr. Chairman, members of the Committee, I am pleased to have the opportunity to meet with you this morning to discuss the critical importance of amending and strengthening the Clean Air Act. As the Governor of Utah, I have had to directly face the issues of environmental protection you have been discussing, and I will say this plainly: we need a stronger, more effective, more workable Clean Air statute. I say this even though Utah boasts some of the cleanest air in the country.

A major attraction of the five National Parks in Utah is that we can see spectacular vistas more than 150 miles away. Salt Lake City and other urbanized areas along the Wasatch Mountains frequently have visibilities of 50 miles or more. However, because of population growth and industrialization together with long winter inversions, even Utah is experiencing significant problems with unhealthy air. To fight this problem, I created a Governor's Clean Air Commission of state and community leaders. The Commission will develop a long-term Clean Air Strategy for Utah involving all of our citizens. Utahns are firmly committed to taking all necessary actions to protect the health of our citizens, to achieve clean air, and guard our clean air resources. If we are to succeed, Congress must expedite passage of a comprehensive revision of the Clean Air Act. Without your quick action, momentum will be lost and our efforts to clean up the air will be set back.

## The Need for Federal Legislation

The need for stronger clean air legislation is compelling. One reason is the growing realization that air pollution problems are more complex, more widespread, and more dangerous than previously thought. Stricter controls are needed not only to safeguard health, but to deal with the mounting economic and environmental costs associated with ozone, carbon monoxide, particulate matter, air toxics, acid rain and other hazardous air pollutants. The states need leadership and action from the federal government to put these controls in place.

While it is true that past efforts have reduced air pollution, it is also true we have not done enough:

- Acid rain continues unabated even as the damage mounts;
- Toxic air pollutants have not been identified and controlled; and
- 101 cities, counties, and other areas, home to 150 million Americans, exceed the ozone limits considered necessary to protect public health.

Medical evidence is building that the current federal standard for ozone does not protect the most sensitive among us, including children, asthmatics, the elderly, and others. Recent studies show that even brief exposure to ozone at levels at or near the federal standard diminishes the lung capacity of even healthy adults. In response, the American Academy of Pediatrics and the American Public Health Association now recommend limiting children's outdoor play when the ozone concentration is one-third lower than the current federal standard.

This pollution also imposes hidden costs on our economy in ways we are just beginning to understand. Forest resources are under severe environmental stress due to ozone. Estimates of the combined value of ozone-related crop losses of wheat, corn, soybeans, and peanuts runs into billions of dollars nationwide. In Utah, pollution from urban areas hundreds of miles away is reaching our national parks -- diminishing the grandeur -- hence the "value" -- of the most majestic land in God's creation.

Time for debate has passed. Time for action has come.

## Cleaning Up the Nation's Air

The Governors recognize that cleaning up the nation's air will require a significant reduction in pollutants. To achieve these reductions, the Governors have called for a stronger and more comprehensive Clean Air Act. As a general matter, we believe the critical issues for clean air reform include urban air quality, motor vehicle controls, particulate matter, air toxics, interstate transport of air pollution, and acid rain.

With regard to ozone and carbon monoxide, the subject of the present hearing, the Governors' recommendations include the following:

First: Tighter motor vehicle control requirements. This is a critical issue for states since there is a direct tradeoff between the control of motor vehicle emissions and the control of stationary sources and industrial growth. In Utah, 89 percent of hydrocarbon emissions are either directly or indirectly related to the use of motor vehicles. Further, motor vehicles account for as much as 52 percent of our ozone and 93 percent of our carbon monoxide problem. Maintenance of the standards in Utah will be impossible without the tightest vehicle emission limits. Moreover, we have learned that the cost per ton of pollution reduced through motor vehicle controls is significantly less than many available control measures on other sources.

We must keep in mind that the next Clean Air bill will largely determine the quality of the air Americans breathe in the next century. While the National Governors' Association has not addressed specific numeric limits for motor vehicles, I believe that the United States ought to go at least as far as the state of California's proposed program for the control of emissions from automobiles, trucks, and buses.

I believe federal law should force the development of strong automotive control technology beyond the recently adopted California requirements, and support your efforts to do just that in the Second Phase of motor vehicle control.

In addition to tighter tailpipe standards, the Governors support an extension of useful life and warranties for emission control components to 10 years or 100,000 miles, a requirement for on-board vapor recovery controls, a stronger automobile test and certification procedure, including a cold-start test at twenty degrees Fahrenheit, and lower gasoline volatility standards. Although NGA has not addressed the issue of carbon dioxide standards for motor vehicles, I personally believe cost effective standards for $CO_2$ are necessary in light of global warming concerns.

The plain fact is, Mr. Chairman, that mobile sources, account for at least half of the air pollutants that threaten public health in our cities. We simply must demand more of motor vehicle manufacturers. We need automobiles that drive us where we want to go without driving us to environmental destruction. We cannot support any bill that falls short in this crucial respect.

Second: A reasonable deadline extension for areas that don't meet the federal air quality standards, conditioned upon the adoption of additional control measures designed to assure compliance with the standards by the new deadline. These schedules and controls need to be tough and workable. Those presented in S. 1630 meet these requirements.

Third: The Governors have called for legislation requiring EPA to issue control technology guidelines for the states to use in reducing emissions from currently uncontrolled hydrocarbon sources, and for federal controls to reduce emissions from consumer and commercial materials such as paints and solvents. We are pleased that S. 1630 addressed these issues.

Finally: With regard to particulate matter (PM-10), it is imperative that Clean Air Act revisions thoughtfully and effectively deal with this more recently regulated pollutant. In Utah as in other parts of the West, PM-10 has become a more urgent and pressing issue than ozone or carbon monoxide. This concern is based on:

1. The severity of the public health problem in some areas;
2. The complexity of understanding the chemistry of PM-10 and its precursors;
3. The fact that until the present time, we have not tried to regulate PM-10, and;
4. The need to control not only industrial and mobile sources but also area sources such as wood stoves and street sweeping.

Support for solving these critical PM-10 issues must be provided. Resource needs should not be overshadowed by the needs for ozone and carbon monoxide.

Reasonable control measures must be required of all sources before extensions are considered. Schedules must be tight and workable. States should not be required to wait for EPA guidance in areas in which they are ready to move forward. Please require EPA to move quickly to develop guidance documents on technology and controls. If these documents are to be useful to us, we need them within 18 months. S. 1630 contains these provisions.

## Conclusion

Mr. Chairman, I have attached a copy of the National Governors' Association's Clean Air Policy which has been approved by all the Governors and conveys our official views. Because much of the debate centers on technical issues, we have also asked a politically and regionally balanced group of staff to develop more technically detailed guidelines for reauthorizing the law based on our policy guidance. Utah has actively participated on this group and endorses the guidelines the group has developed. These guidelines are attached as well. While these guidelines do not represent official NGA Policy, they have been provided to all Governors for review and found acceptable by most. I ask that this statement and those attachments be included in the record of this hearing.

Mr. Chairman, I want to thank you again for this opportunity to discuss the Clean Air Act. The Governors are pleased that Congress is making progress towards strengthening the Clean Air Act, and look forward to working with you to secure early passage of legislation that will finally get the job done.

Attachments

# ENERGY AND ENVIRONMENT

## D-15. THE CLEAN AIR ACT

### 15.1 Preface

The Governors strongly support the reauthorization of the Clean Air Act to continue the national effort to attain and maintain ambient air quality standards that protect the public health and welfare. Streamlining the act, particularly through the greater delegation of administrative responsibility to the states, can go a long way toward ensuring that the goals of protection of public health and expansion of energy and economic development can be achieved simultaneously.

### 15.2 State Role

The Governors affirm that the states must have the primary responsibility and authority for the control and abatement of air pollution. This state authority should include both the design and implementation of air quality programs. The federal government should establish air quality standards and deadlines, and should review and certify the design of state implementation plans for air quality. The Governors favor a review of the federal government's process for establishing air quality standards in a timely fashion and consistent with congressional intent regarding the protection of public health. Audits of state performance should be carried out by the Environmental Protection Agency (EPA), but detailed federal review and approval is neither necessary nor desirable. In reviewing a state implementation plan, EPA should approve strategies that result in attainment of the ambient standard and that satisfy federal minimum technology standards. EPA should be given a reasonable time to review the state plan and should assume the burden of proof in disapproving any elements of it. If EPA does not act within such reasonable time, the state plan should be considered approved.

### 15.3 Policy for Areas Not Meeting the National Standards (Nonattainment Policy)

With greater responsibility, the states can and should be able to accommodate new industrial growth in nonattainment areas in accordance with a policy of achieving net air quality benefits and ensuring reasonable, steady progress toward attainment of the standards.

The Governors support the establishment of binding deadlines for the achievement of ambient air quality standards. The Clean Air Act should contain a provision allowing EPA to provide an extension for up to a statutorily specified period for areas with severe and persistent air quality problems. For an area to qualify for such an extension, increasingly more stringent control strategies would have to be implemented over time. Failure to implement such strategies successfully should result in federal sanctions, tailored to the magnitude and nature of the failure. Use of inspection and maintenance programs is an appropriate strategy that should be implemented in areas currently not in attainment with national air quality standards, or that fail to meet expected milestones under applicable EPA agreements. The Governors also encourage the use of effective tampering and misfueling control measures as a contribution towards attainment of national air quality standards.

The lowest achievable emission rate (LAER) requirement for new sources which emit more than 100 tons per year of any regulated pollutant in a nonattainment area is a limitation on economic development in urban areas with no significant improvements in air quality. In addition, it encourages urban sprawl. All new sources should be evaluated equally under the best available control technology. The LAER concept should be dropped. The Governors oppose the extension of nonferrous smelter deadlines.

### 15.4 Policy for Areas Cleaner than the National Standards (Prevention of Significant Deterioration Policy)

The Governors believe that the Clean Air Act must continue to rely upon Class I increments to protect against deterioration of air quality in areas of prime national interest, such as national parks and wilderness areas. In no case should any area cleaner than national standards be allowed to deteriorate into nonattainment status. In other areas cleaner than the national standards, a Class II increment system should be implemented and states should have the primary responsibility for the implementation of visibility programs. Best available control technology should continue to be required in attainment areas.

### 15.5 Policy for Automotive Pollutants

The Governors favor the strengthening of existing automotive emission standards and the development and implementation of strict diesel and heavy duty standards, including attainment of standards at altitude and their enforcement during the vehicle's useful life. The Governors recognize that any relaxation of federal standards for automobile control would place a burden on the states to regulate industrial growth more stringently in order to achieve national air standards. This trade-off between automobile control standards and regulation of industrial growth must be weighed carefully by the Congress in determining appropriate auto standards.

### 15.6 Policy for Interstate Transport

The Governors recognize that the long-range transport of air pollutants creates serious institutional, equity, and air quality problems for many areas of the country. The Governors support a program to control acid deposition. The Governors believe that any federal program aimed at controlling long-range transport must involve the designation by the Congress of regional transport corridors, including both source and receptor states. EPA should be empowered to designate additional corridors as the need arises. The states within designated corridors should be granted a reasonable period of time to reach agreement on reducing the long-range transport of air pollutants. If the concerned states fail to reach such an agreement, EPA should be authorized to take specific appropriate action in the designated corridor. Congress should make certain that EPA effectively implements Section 126 of the Clean Air Act to ensure that interstate pollution does not violate state or federal air quality standards, consume significant portions of another state's PSD increments, or adversely affect air quality related values in Class I areas. The Clean Air Act should be amended as necessary to provide such assurance.

### 15.7 Policy for Ozone Attainment

There are as many as seventy urban areas throughout this country that may not meet health based ozone standards by the December 31, 1987 deadline established in the Clean Air Act. Eighty million people live in these areas. Approximately 30 million of these people are particularly sensitive to the health effects of ozone.

Many states, acting individually, cannot achieve the national ozone standard. There is a need for strong national leadership by the federal government in order to address this major public health problem:

Therefore, the United States Environmental Protection Agency should take a number of aggressive actions including:

- Immediate development and implementation of a nationally comprehensive ozone control strategy building on state and federal plans and actions already in place;
- Work with states to maximize the effectiveness of our nation's air pollution control program;
- Define and adopt reasonably available controls on existing hydrocarbon air pollution sources, with special emphasis on areas where the emissions contribute to violations of the National Air Quality Standard for ozone without regard to whether they are in the same area or state as the violation;
- Expeditiously adopt additional motor vehicle control measures such as gasoline evaporation standards; more stringent regulations on trucks; nationwide onboard control of gasoline vapors; and strengthened test and certification procedures, including a cold start test at 20°F.
- Provision of guidance and alternatives to the states for initiating or improving automobile inspection and maintenance requirements as may be needed dependent on the severity of nonattainment.

### 15.8 Policy for Toxic Air Pollutants

The Governors support simplifying the current system for listing hazardous air pollutants under Section 112 of the Clean Air Act and believe EPA has been too slow in making listing decisions. The Governors believe that any air pollutant believed to be hazardous should be expeditiously reviewed, and if the administrator finds it to be a hazardous air pollutant under the meaning of Section 112, it should be immediately listed. The Governors support effective statutory deadlines requiring EPA to regulate toxic air pollutants on an expedited basis. Once such a pollutant has been listed, existing significant sources should be required to comply with control measures adequate to protect public health, and in no case less stringent than that provided by the best available technology, determined by the permitting agency. To assist states in permitting existing sources, EPA should publish control guidelines within two years of listing a pollutant and should implement a national air toxics clearinghouse on hazardous pollutants. Significant new or modified sources of listed pollutants should be required to comply with more stringent control measures than existing sources are required to meet. EPA should provide technology guidance to the states for new sources designed to achieve public health protection with an ample margin of safety. EPA should review such guidance for new sources periodically.

States should be explicitly authorized to require controls more stringent than the federal guidance. In addition, for hazardous pollutants determined to be of local rather than national scope, states should develop control strategies through a state implementation plan process. Federal technical assistance should be provided to states to develop such control strategies. Such control strategies should be federally enforceable.

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Adopted August 1980; revised February 1982, August 1983, February 1984, July 1984, February 1985, February 1987, and February 1989.

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II. **FEDERALLY REQUIRED CONTROLS.** EPA should be directed to adopt within three years of enactment regulations (at a rate of at least 4 per year) for the 12 largest currently existing uncontrolled hydrocarbon source categories, after opportunity for review and public comment. These controls should be implemented within two years after promulgation. A "hammer" requirement such as an automatic control provision or escalating financial charge based on emissions should be included on these source categories. In addition, EPA should adopt by rule standards for consumer and commercial solvents, architectural coatings, pesticide applications, traffic marking coatings, metal parts coating, and for marine vessel loading and unloading. States should be explicitly allowed to adopt more stringent standards.

III. **MODELING.** Modeling can be an appropriate tool to identify controls necessary beyond required minimums, but recommended minimum federal controls, including national measures and federal minimum controls on currently uncontrolled sources, should be put in place now, and 3-5 years should be allowed for development of improved inventories, better models and monitoring, and implementation of controls, before modeling is required.

The EPA must continue to refine models and to conduct a comprehensive research program, including an examination of the role of NOx in ozone formation, quantification of the role of transport of ozone and ozone precursors, and identification of the relationship between ozone precursor emissions and ozone concentrations. In order to support the timetable imposed by the deadline extensions, parameters of the model must be identified immediately and adequate resources must be provided. The model and the data necessary to run it must be available for use by 1992.

IV. **SANCTIONS.** Sanctions should be applied only for failing to plan or to implement statutory requirements, not for failing to attain the standards despite best faith efforts. Areas which submit plans and implement required measures, but nonetheless fail to attain the standards by the extended deadline, should move into the next higher control category as specified below.

Monitoring should be conducted throughout the extension period to allow mid-course corrections. Extended-deadline areas would be considered to have attained the standard until a monitored violation (i.e., 4 exceedances in a 3-year period) after the extension deadline. An area should be reclassified attainment by operation of law any time it meets the criteria for attainment.

V. **EXTENSION REQUIREMENTS**. Marginal areas should be allowed an extension of up to three years after enactment if they require RACT (including new federal regulations) on major stationary sources and implement an I/M program. Areas in this category which fail to attain the standards after three years or to maintain the standards should bump into the five year category and have two years to implement the remaining controls;

Moderate areas should be allowed an extension of up to five years after enactment if they do all the above and:

- meet new source review requirements for 25 ton sources, including applicable control requirements and offsets greater than 1:1;

- implement stage II vapor control in ozone nonattainment areas with exemptions and phasing for small businesses at the states' option (e.g. for small stations, only require it for new or replaced tanks);

- require reasonably available control technology (RACT) for existing 25 ton sources;

- allow bubbling at existing plants only if there is a net reduction in emissions;

- disallow netting out of new source review

- for area-wide carbon monoxide nonattainment problems, require an alternative fuels program during the winter season. Caution should be exercised to ensure alternative fuels programs don't cause or exacerbate other environmental problems;

  - areas in this category which fail to attain the standards within five years or to maintain the standards should bump into the ten year program, with five additional years allowed.

Serious areas should be allowed an extension of up to ten years after enactment if they do the above and:

- prohibit bubbling;
- meet new source review requirements for new sources over 10 tons (25 tons for carbon monoxide areas), including lowest achievable emissions rate (LAER) and offsets greater than 1.2:1 from real, contemporaneous reductions;
- require RACT on existing 10 ton HC sources and 25 ton CO sources;
- require alternative fuels or low emission vehicles in centrally fueled fleets greater than 50 vehicles;
- develop an enhanced emission inventory with an annual update;
- require enhanced I/M;
- conduct modeling and develop an attainment demonstration in the fifth year. If the model does not show attainment by the tenth year, an area in this category would bump immediately into the over-ten year category and would be required to achieve the 5% annual reduction.

Severe areas should be allowed an extension greater than ten years after enactment if they do all the above plus:

- modeling within 3 years to show attainment as soon as practicable;
- require not less than a 50% reduction in emissions within 10 years of enactment and reductions averaging 5% annually thereafter until attainment;
- require measures to improve vehicle occupancy, reduce congestion, and reduce vehicle miles traveled (VMT);
- make each sources subject to a specific maximum allowable level of total emissions established by the state;
- require alternative fuels or low emission vehicles on centrally fueled fleets greater than 15 vehicles; and
- for carbon monoxide areas, ban wood burning on days expected to exceed the standard in the MSA, unless a demonstration is made that wood burning emissions have significant no effect on ambient concentrations in the area.

Areas which are classified less than severe and which already have advanced controls in place should be able to choose the 10 year or greater-than-10 year program.

VI. **OZONE TRANSPORT**. The Congress should establish regional transport corridors for areas contributing to and/or affected by the interstate transport of ozone, consisting of states or specific parts of states, such as a region for the Northeast and Mid-Atlantic, and one for southern Lake Michigan. In addition, the EPA should be empowered to establish additional corridors or to add or delete states or parts of states from any corridor upon petition by any state or upon its own initiative, after a finding as to whether the sources in a particular area contribute to nonattainment in that area or in any downwind area.

When a transport area has been delineated, it should immediately comply with I/M and RACT for all major sources. The states within the transport area should be given a reasonable period of time to reach agreement on additional measures to reduce the long range transport of air pollutants. Regional ozone models should be used as the basis for the development of an attainment demonstration for the region. The states in the region should develop and pursue agreement for a set of control strategies in each state which provide for attainment in all areas of the region by the applicable deadline.

If the concerned states fail to reach such an agreement, the EPA should be directed to develop a federal control strategy in the region. If the states in the corridor unanimously agree upon a mitigation strategy, EPA should be able to disapprove it only upon affirmative proof that it does not satisfy the requirements of law. Congress should clarify that Section 126 of the Clean Air Act applies to all sources and groups of sources as necessary to ensure that interstate pollution does not cause or significantly contribute to violations of state or federal air quality standards.

VII. **MOTOR VEHICLE MEASURES.** The Congress should tighten motor vehicle emission standards for all classes of vehicles, extend the useful life and warranty for motor vehicle emission control components, lower gasoline volatility standards, adopt on-board vapor recovery controls, adopt on-board diagnostics, and strengthen the automobile test and certification procedure, including testing vehicles under actual driving conditions and fuels and developing a cold start test at twenty degrees Fahrenheit. Requirements at least as stringent as those which are currently proposed in California should apply nationwide.

The agreement between EPA and DOT should be altered to ensure that measures necessary to air improvement have the highest priority in the Transportation Improvement Plan.

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TESTIMONY
OF

GOVERNOR MADELEINE M. KUNIN

before the

COMMITTEE ON ENVIRONMENT and PUBLIC WORKS
SUBCOMMITTEE ON ENVIRONMENTAL PROTECTION
U. S. SENATE

regarding

THE CLEAN AIR ACT AMENDMENTS OF 1989

September 27, 1989

Mr. Chairman, members of the Committee, I am grateful for the opportunity to appear before you on one of the most urgent environmental issues facing the nation today -- the need to reauthorize a strong and effective Clean Air Act. As Governor of Vermont, I not only represent my state, I am also here on behalf of the National Governors' Association in my capacity as the Chair of the NGA Committee on Energy and Environment.

Our sense of urgency is based not on fear, but on fact. Across the breadth of this country we see the signs of environmental distress, from forests damaged by acid rain in Vermont to brown clouds of smog in Los Angeles. There is evidence that our polluting activities may be disturbing the conditions for life as we know it on this earth. The facts are powerful. We know that air pollution in our cities is related to global climate change. We know we must reduce pollutants at the source -- we cannot simply transfer pollutants from one region of the country, or the world, to another.

What gives me encouragement, however, is that I am firmly convinced that Americans are ready to take tough steps to protect our fragile environment, even if it requires changing our own behavior or giving up certain luxuries. For example, we in Vermont recently adopted a landmark law banning the sale of automobiles equipped with air conditioners that use CFC's after 1993, and regulating air conditioner maintenance in cars almost immediately.

But Vermont is not unique, Mr. Chairman. The Governors of this nation, who represent a diverse constituency, cutting across the political spectrum, are in unanimous agreement on the need for strong measures to reverse the deterioration of our environment. Specifically, the Governors have now agreed on a firm plan of action to clean up the nation's air.

## Cleaning Up the Nation's Air

We agree that cleaning up the nation's ozone and carbon monoxide problems will require significant reduction of pollutants in most of the nation's urban areas. To achieve these reductions, the Governors have called for a stronger and more comprehensive Clean Air Act. We are extremely pleased that you have developed this bill and made a commitment to securing final passage this session. Although as a matter of policy, the National Governors' Association does not endorse specific legislation, Mr. Chairman, I would note that your bill, S. 1630, is consistent with the framework recommended by the Governors, and I applaud your efforts to develop tough, effective legislation.

I would like to highlight several specifics.

First, the Governors have endorsed the concept of reasonable deadline extensions for areas that violate the federal air quality standards, conditioned upon the adoption of additional control measures designed to assure compliance with the standards by the new deadline. The "menu" of additional control measures you have included in your bill seems appropriate.

Second, the Governors believe it is essential to tighten motor vehicle control requirements. This is a critical issue for us because there is a direct tradeoff between the control of motor vehicle emissions and the control of stationary sources and industrial growth. We have concluded that the cost per ton of pollution reduced through motor vehicle controls is significantly less than other available control measures. That is why we support the following:

1. More stringent emission standards.
2. The extension of useful life and warranties for emission control components to 10 years or 100,000 miles.
3. The requirement for on-board vapor recovery controls.
4. A stronger automobile test and certification procedure, including a cold start test at twenty degrees Fahrenheit.
5. Lower gasoline volatility standards.

Although NGA policy doesn't address carbon dioxide emissions standards for motor vehicles, such a new standard signals a good start in this country's response to the threat of global warming.

Third, we believe any successful bill must create specific emission control requirements to address the interstate transport of ozone. S. 1630 recognizes this problem and designates regional corridors with the authority to implement vehicle inspection and maintenance programs and controls on stationary sources.

I particularly want to reemphasize the Governors' recommendation that you develop an acid rain program, including a ten million ton reduction in sulfur dioxide emissions and a fair and equitable plan for financing those reductions. The damage from acid rain is mounting steadily, and it is important that we take meaningful action as soon as possible.

Mr. Chairman, I have attached a copy of the NGA Clean Air Policy which has been approved by all the Governors and conveys our official views. Because much of the debate centers on technical issues, we have also asked NGA staff, representing a nation-wide and bi-partisan constituency, to develop more technically detailed guidelines regarding nonattainment, based on our policy guidance. Those guidelines are also attached. While these do not represent official NGA Policy, the guidelines have been provided to all Governors for review and found acceptable by most. I ask that this statement and those attachments be included in the record of this hearing.

## Conclusion

Mr. Chairman, I want to thank you again for this opportunity to talk about the Clean Air Act. When I ask school children who come to the State House what they would do if they were Governor of Vermont, their answer in recent months has followed the same pattern: protect our environment.

The Clean Air Act is the most important single piece of environmental legislation to be acted upon by this Congress. It, more than any other initiative, will have a profound long-term effect on the life of this planet. I urge you, on behalf of our children and our children's children, to enact the strongest law possible.

Attachments

# ENERGY AND ENVIRONMENT

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- develop an enhanced emission inventory with an annual update;

- require enhanced I/M;

- conduct modeling and develop an attainment demonstration in the fifth year. If the model does not show attainment by the tenth year, an area in this category would bump immediately into the over-ten year category and would be required to achieve the 5% annual reduction.

Severe areas should be allowed an extension greater than ten years after enactment if they do all the above plus:

- modeling within 3 years to show attainment as soon as practicable;

- require not less than a 50% reduction in emissions within 10 years of enactment and reductions averaging 5% annually thereafter until attainment;

- require measures to improve vehicle occupancy, reduce congestion, and reduce vehicle miles traveled (VMT);

- make each sources subject to a specific maximum allowable level of total emissions established by the state;

- require alternative fuels or low emission vehicles on centrally fueled fleets greater than 15 vehicles; and

- for carbon monoxide areas, ban wood burning on days expected to exceed the standard in the MSA, unless a demonstration is made that wood burning emissions have significant no effect on ambient concentrations in the area.

Areas which are classified less than severe and which already have advanced controls in place should be able to choose the 10 year or greater-than-10 year program.

VI. **OZONE TRANSPORT.** The Congress should establish regional transport corridors for areas contributing to and/or affected by the interstate transport of ozone, consisting of states or specific parts of states, such as a region for the Northeast and Mid-Atlantic, and one for southern Lake Michigan. In addition, the EPA should be empowered to establish additional corridors or to add or delete states or parts of states from any corridor upon petition by any state or upon its own initiative, after a finding as to whether the sources in a particular area contribute to nonattainment in that area or in any downwind area.

When a transport area has been delineated, it should immediately comply with I/M and RACT for all major sources. The states within the transport area should be given a reasonable period of time to reach agreement on additional measures to reduce the long range transport of air pollutants. Regional ozone models should be used as the basis for the development of an attainment demonstration for the region. The states in the region should develop and pursue agreement for a set of control strategies in each state which provide for attainment in all areas of the region by the applicable deadline.

If the concerned states fail to reach such an agreement, the EPA should be directed to develop a federal control strategy in the region. If the states in the corridor unanimously agree upon a mitigation strategy, EPA should be able to disapprove it only upon affirmative proof that it does not satisfy the requirements of law. Congress should clarify that Section 126 of the Clean Air Act applies to all sources and groups of sources as necessary to ensure that interstate pollution does not cause or significantly contribute to violations of state or federal air quality standards.

VII. **MOTOR VEHICLE MEASURES**. The Congress should tighten motor vehicle emission standards for all classes of vehicles, extend the useful life and warranty for motor vehicle emission control components, lower gasoline volatility standards, adopt on-board vapor recovery controls, adopt on-board diagnostics, and strengthen the automobile test and certification procedure, including testing vehicles under actual driving conditions and fuels and developing a cold start test at twenty degrees Fahrenheit. Requirements at least as stringent as those which are currently proposed in California should apply nationwide.

The agreement between EPA and DOT should be altered to ensure that measures necessary to air improvement have the highest priority in the Transportation Improvement Plan.

TIMOTHY E. WIRTH
COLORADO

United States Senate
WASHINGTON, DC 20510

COMMITTEES
ARMED SERVICES
BANKING
BUDGET
ENERGY AND
NATURAL RESOURCES

## STATEMENT OF THE HONORABLE TIMOTHY E. WIRTH
## SEPTEMBER 27, 1989
## ON PROPOSED AMENDMENTS TO THE CLEAN AIR ACT
## BEFORE THE SENATE SUBCOMMITTEE ON ENVIRONMENTAL PROTECTION

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Mr. Chairman and Members of the Committee, I want to thank you for this opportunity to testify in favor of legislation to strengthen the Clean Air Act.

The people of Colorado want to clean up our air. There is no issue on which there is a broader or a deeper consensus in our state. Coloradans see clean air as a necessity for our economic growth. And they see it as necessary for our health.

The primary goal of the Clean Air Act is a simple and clear one -- to ensure that the air we breathe is not a hazard to our health. Right now, we are not meeting that goal. Dr. Michael Schonbrun of the National Jewish Center for Immunology and Respiratory Medicine in Denver has testified to this Subcommittee in depth about the health hazards posed by carbon monoxide pollution, and the staggering cost in dollars -- to say

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nothing about their cost in terms of pain, suffering, and yes, even human life.

We've done a lot, as a state, and at the local level, to clean our air. We've made great progress, due to cleaner cars; local inspection and maintenance programs; programs to reduce the total mileage travelled; and an aggressive oxygenated fuels program. A lot of that progress was due to the local leadership of our Governor, Roy Romer, and of leaders like Mayor Federico Pena of Denver, who will be testifying later today.

But Denver and the other cities along Colorado's front range need help if they are to meet the goals of the Clean Air Act. And cleaner cars are an important part of that help -- help that only the Congress can provide. I urge you to provide that help.

Mr. Chairman, I want to thank you, Senator Chafee, and the other Committee Members who have joined you as cosponsors, for drafting a bill that sets out a strong program for continuing the improvements we have made in motor vehicle emissions over the past decade, and I would like to request that you add me as a cosponsor of that bill, S. 1630.

75% of the carbon monoxide emissions in the Denver metro area, and up to 50% of the fine particles that contribute to Denver's "Brown Cloud", are emitted by cars and trucks. And car use is growing.

We have great hopes for growth in Colorado. And with that growth will come more cars, and more driving. Coloradans now drive 30 million miles every day in the Denver area -- and our transportation planners tell us that could double by the year 2010.

Aggressive transportation control measures, including major investments in rapid transit, can slow this growth. But without cleaner cars and trucks, we face a future not of continued improvement -- but of deterioration of our air. Unless we do all that we can to control emissions from motor vehicles, we cannot win our fight for clean air.

This bill includes several provisions that are of particular importance to Colorado, because they directly address our greatest needs -- particularly, the carbon monoxide pollution that plagues high altitude, cold-weather cities like Denver and Phoenix and Reno.

These are provisions we need to enable us, when coupled with vigorous local initiatives, to clean our air and to keep it clean. I have strongly advocated these measures in my past testimony to the Committee, and I am gratified that they are included in your bill.

These provisions include:

-- Cold-start emission standards. In Denver, as much as 70% of carbon monoxide emissions during a winter's evening rush hour come from starting cold cars and the two to five minutes before their engines -- and their catalytic converters -- warm up. S. 1630, like President Bush's bill, proposes making engines meet a CO emission standard at 20° Fahrenheit, to control this problem. S. 1630 suggests a standard of 10 grams per mile by 1993. I think that with moderate cost, we could do even better, and I encourage the Committee to pursue that. Our local experts tell us that this is the single most effective step we can take to reduce future CO emissions in Colorado.

-- 100,000 mile "useful life". S. 1630 requires manufacturers to certify their vehicles to keep meeting emission standards for 100,000 miles. Mr. Chairman, our local air planners tell me that this is the second most important measure for reducing future emissions in the Denver metro area, and keeping them low.

-- Setting lower CO emissions targets (3.4 gms/mile at 20° and 1.7 gms/mile at room temperature) for the year 2000. Will this be difficult? Yes, particularly if coupled with the requirement that it be sustained for 100,000 miles. But, Mr. Chairman, we cannot be satisfied with today's technology. We've got to keep improving if we are to stay ahead of the curve.

I want to thank the authors of S. 1630, too, for including tough measures in the bill to insure the closest possible coordination and cohesion between local planning to meet clean air goals, and local planning to meet transportation needs. This is our key problem. Our transportation needs are growing, and unless we have the closest possible coordination between these two planning efforts, we will fail to meet the goals of the Clean Air Act. We will have lots of places to drive that no one will want to go.

I would like to see some additional measures adopted by the Committee, and I have detailed these in my statement.

One concerns cleaning up diesel fuel. S. 1630, like President Bush's bill, would set a limit on the sulfur in diesel fuel, and set a minimum cetane rating for that fuel. The cetane rating level set in the bill is about the average rating of existing fuels. Mr. Chairman, this is a good first step, but I would ask you to consider going a step further and directly limit the amount of hard-to-burn aromatic compounds in diesel fuel to no more than 20% of the fuel. This not only greatly reduces the particulates coming from diesels; it also reduces carbon monoxide emissions.

This would entail considerable reformulation of diesel fuels. But it is feasible. I would point out that California recently passed an even more stringent limit of no more than 10% aromatics in diesel fuel, starting in 1991.

A second matter concerns testing cars at high-altitude to ensure that they continue to meet EPA standards in actual use in high-altitude cities like Denver. I would like to see a provision directing the EPA to establish and continue such in-use testing at a high-altitude location.

Senator Baucus and Senator Chafee, I want to conclude by thanking you and your colleagues for your courage in proposing a strong clean air bill, and for keeping your eyes clearly on the goal -- clean air for all Americans. I pledge to work with you, the other Members of the Committee, and all of our colleagues, to achieve a stronger Clean Air Act that will enable us not only to reach the goal of clean air for our citizens, but to keep meeting it.

# # #

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# TESTIMONY

SUBMITTED BY

PATRICK DOUGHERTY

STATE REPRESENTATIVE, MISSOURI

ON BEHALF OF

THE NATIONAL CONFERENCE

OF STATE LEGISLATURES

TO THE

U.S. SENATE ENVIRONMENT AND PUBLIC WORKS

SUBCOMMITTEE ON ENVIRONMENTAL PROTECTION

SEPTEMBER 27, 1989

Denver Office: 1050 17th Street • Suite 2100 • Denver, Colorado 80265 • 303/623-7800

Mr. Chairman and Members of the Committee. My name is Patrick Dougherty, and I am a member of the Missouri General Assembly, District 67 which is located in St. Louis. I serve as Chairman of the House Energy and Environment Committee in Missouri. In addition I serve on the Environment Committee of the National Conference of State Legislatures (NCSL).

I thank you for the opportunity to appear before you today on behalf of NCSL, an organization representing legislators and staffs of the nation's 50 states, its commonwealths and territories. Throughout my involvement with NCSL, I have found it to be an organization concerned with developing sound public policy, an organization committed to helping state legislators maintain and upgrade the quality of life for their constituents.

One of the most serious threats to quality of life in the United States in terms of public health is the failure of many areas of the country to achieve the standards established under the Clean Air Act for ozone and carbon monoxide. According to the U.S. Environmental Protection Agency (EPA), exposure to ozone at levels equal to or slightly above the current standard can significantly damage or impair the proper functioning of lungs in healthy individuals and children. The EPA also reports that exposure to unhealthful levels of carbon monoxide disrupts the delivery of oxygen to the body's tissues. People with cardiovascular disease and respiratory problems are the most susceptible to these problems. EPA's findings alarmingly point out that even low-levels of carbon monoxide may harm fetuses and would affect aerobic capacity, visual perception, manual dexterity and learning ability in healthy people.

States have struggled over the past 10 to 15 years to implement responsible air pollution control programs in order to comply with federal standards. Most of us now recognize that meeting these standards is not just to provide clean air for scenic vistas but is absolutely essential to protecting the public health of our citizens.

Despite passage of the Clean Air Act in 1970 which imposed deadlines for achieving ambient air quality standards by 1977, despite deadlines extended to 1982 and then 1987, and despite the best efforts of most states, many areas of the nation did not attain these standards by the December 31, 1987 statutory deadline nor the extended deadline of August 31, 1988. At that time, more than 70 areas failed to meet the ozone standard and more than 80 areas failed to meet the carbon monoxide standard. This includes the Greater St. Louis area about which I am and have been very concerned.

The nationwide situation is not improving as evidenced by EPA's data for 1988. It shows that over 90 areas exceeded the national ozone standard. The most updated information regarding carbon monoxide indicates that approximately 60 areas are out of compliance. The perplexing decision facing policymakers at all levels is how to effectively remedy these problems.

Overall, NCSL is supportive of a strong, sensible policy to help this nation reach its air quality goals. NCSL is appreciative of your leadership, Mr. Chairman, and your efforts towards producing workable legislation to deal with the ozone and carbon monoxide nonattainment issue. S. 1630 embodies many of the concepts we would support in legislation, including:

- o establishment of new nonattainment deadlines;
- o imposition of sanctions only when state implementation plans are not properly submitted or fully implemented;
- o imposition of controls based on the severity of the air pollution problem;
- o additional and tighter controls on mobile sources;
- o regulation of interstate transport of pollutants; and

- classification of nonattainment areas on monitored data.

In addition, NCSL supports legislation, and specific provisions of S. 1630 that:

- strengthen existing automotive emissions standards, including the development and implementation of strict diesel and heavy duty standards;
- require the attainment of standards at altitude and their enforcement during the vehicle's useful life;
- extend the useful life and warranty for motor vehicle emission control components;
- prevent the relaxation of federal standards for automobile controls that would result from fleet averaging;
- require lower gasoline volatility standards;
- adopt on-board vapor recovery or Stage II controls;
- strengthen the automobile test and certification procedure, including testing vehicles under actual driving conditions and fuels and developing a cold start test at twenty degrees Fahrenheit;
- strengthen the Corporate Average Fuel Economy (CAFE) standards;
- promote increased research, development and use of alternative fuels;
- encourage the production of lower pollution vehicles as well as programs to reduce vehicle miles traveled, including, but not limited to, mass transit and carpools; and
- require inspection and maintenance programs for all areas exceeding the National Ambient Air Quality Standard for ozone or carbon monoxide.

## DEADLINE EXTENSIONS

The National Conference of State Legislatures is supportive of deadline extensions as providing opportunities for states with areas in noncompliance to continue or begin enhanced efforts to meet the standards. These extensions, however, should be for specified periods of time based on the severity of the problem. We do not view this as letting problem areas off the hook. As state legislators, we are fully supportive of the purpose and intent of the Clean Air Act to provide for the protection of public health. We agree with the philosophy of calling for additional, more stringent controls as a quid pro quo for the extension. Without this requirement, inequities would persist for areas that have expended significant efforts in attaining the ambient air quality goals of the Clean Air Act.

## SANCTIONS

The issue of sanctions should be closely tied to deadline extensions. Once again there is a need to be fair to areas that have diligently tried to reach the goal of meeting the ambient air quality standards. However, NCSL recognizes the need for some sanctions for those areas which may act less responsibly. Our policy seeks to have sanctions imposed only when an area has failed to properly plan or fully implement a plan or has failed to comply with specified control requirements.

Once the issue of when to impose sanctions is settled, the type of sanction must be decided. Of particular concern, however, is that sanctions should not be counterproductive to meeting environmental goals. In other words, withholding of sewer construction grants or air quality grants should not be used as sanctions to bring compliance with the ambient air quality standards. We are appreciative that S. 1630 modifies the sanction of withholding highway funds to exclude areas where air quality would be harmed if funding was denied. In addition, NCSL is appreciative that withholding of sewer grants or hookups is not included as a sanction. NCSL does believe, however, that fair sanctions are necessary in the renewal of the Clean Air Act.

## MOBILE SOURCES

NCSL also believes that tighter tailpipe standards are necessary to control automotive emissions. This is especially important because mobile sources are the major cause of nonattainment for carbon monoxide standards as well as being a significant contributor to ozone precursors. Stationary sources have already received substantial regulation, and while we are not suggesting such sources cannot achieve more, we encourage a more balanced distribution of controls to attain compliance which must of necessity include tailpipe emissions.

In regulating mobile sources, we urge the strengthening of Corporate Average Fuel Economy (CAFE) standards, and increased research, development, promotion and use of alternative fuels. We applaud the Secretary of Transportation's decision to require a CAFE standard of 27.5 miles per gallon and we encourage the Congress to further increase the CAFE standard.

In addition, current law requires vehicles to meet the emissions standards for 5 years or 50,000 miles. However, since most vehicles now on the roads are operated significantly longer than this, they should be required to meet the emissions standards throughout their useful life. Thus, the warranty on emission equipment and the number of years and miles for which the vehicle must meet the standards should be extended.

One other important way to control mobile source emissions is through an Inspection and Maintenance (I/M) program. NCSL supports implementation of I/M programs for all areas exceeding the air quality standards for several reasons. First, as we move toward lower vehicle emissions through installed equipment, inspection/maintenance programs act as insurance to protect that investment and see that the equipment continues to function properly. Second, while the public may express some anxiety prior to or at the beginning of a program, the public has generally been supportive of these programs after they are installed and working. Third, keeping vehicles properly tuned in order to pass inspection allows them to function more efficiently, thus saving energy. The I/M programs can therefore be said to help decrease energy usage and help insulate us from future energy crises. Finally, and perhaps, most importantly, once the new car emission programs and stationary source control programs are implemented, there are less cost effective options left to reduce emissions of hydrocarbons and carbon monoxide. The Inspection and Maintenance program is one of the single most cost effective technologies left for controlling these sources, with the possible exception of controlling volatility of gasoline. Compared to controls on stationary sources and solvents, Inspection and Maintenance programs are quite cost effective.

Finally, NCSL supports adopting legislation that requires lower gasoline volatility standards, on-board vapor recovery systems, Stage II controls, a cold-start test, production of lower pollution vehicles, and programs that reduce vehicle miles traveled. All these controls aid in reducing ozone precursors and carbon monoxide emissions and should be incorporated into air pollution control programs.

## INTERSTATE TRANSPORT

Several sections of the country are experiencing problems from transport of air pollution to areas downwind of the pollution source. The NCSL supports the concept of regulating long-range, interstate transport of pollutants. We recommend that the Clean Air Act be modified to provide more useful criteria for a state to use in showing that emissions from sources in another state adversely affect it. In additon, the Act should be amended to allow a state to petition the U.S. EPA for a finding that any aggregate of sources, as well as any single source in another state violates the Act. Time deadlines should be established for EPA action.

## CLASSIFICATION

We also support the concept of classifying areas based on monitored data rather than using models. Experience has shown that these models have not been consistently accurate in predicting what type and level of controls were needed to achieve the air quality standards desired. Using actual data to gauge the problem provides more consistent and equitable solutions so that areas with similar problems are adopting similar controls.

Mr. Chairman and Members of the Committee, I'd like to thank you for allowing NCSL the opportunity to share its views with you. As you are aware, solutions to the problems we have discussed today involve a delicate balancing of roles for all levels of government. We at the state level appreciate your efforts and pledge our commitment to work with you in attaining the Clean Air Act's goals for ozone and carbon monoxide levels. We again emphasize that we are cognizant of the necessity to attain these goals to protect public health for all of our citizens and we are in complete support of the prompt reauthorization of the Clean Air Act. NCSL supports many of the concepts in S. 1630 and thanks you, Mr. Chairman, for your leadership.

**NATIONAL**
**ASSOCIATION**
*of*
**COUNTIES**

*440 First St. NW, Washington, DC 20001*
[redacted]

STATEMENT OF

THE HONORABLE RANDALL FRANKE,

COMMISSIONER, MARION COUNTY, OREGON

AND

CHAIRMAN, NATIONAL ASSOCIATION OF COUNTIES

ENVIRONMENT, ENERGY, AND LAND USE STEERING COMMITTEE

BEFORE THE

SUBCOMMITTEE ON ENVIRONMENTAL PROTECTION

SENATE ENVIRONMENT AND PUBLIC WORKS COMMITTEE

ON BEHALF OF

THE NATIONAL ASSOCIATION OF COUNTIES

Washington, D.C.

September 27, 1989

THANK YOU MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE FOR THE OPPORTUNITY TO TESTIFY ON S. 1630 A BILL WHICH WOULD EXTEND AND SIGNIFICANTLY AMEND THE CLEAN AIR ACT. MY NAME IS RANDALL FRANKE. I AM AN ELECTED COUNTY COMMISSIONER FROM MARION COUNTY, OREGON (WHICH INCLUDES THE CITY OF SALEM), AND THE CHAIRMAN OF THE NATIONAL ASSOCIATION OF COUNTIES* ENVIRONMENT, ENERGY, AND LAND USE STEERING COMMITTEE.

FIRST OF ALL, THE NATIONS COUNTIES WANT TO COMMEND ALL OF YOU FOR EXPEDITIOUSLY MOVING TO ADDRESS THE MAJOR PROBLEM OF WIDESPREAD NONATTAINMENT OF THE CLEAN AIR ACT STANDARDS FOR OZONE, CARBON MONOXIDE AND PM10. IT IS A MATTER OF GREAT CONCERN TO US THAT 597 COUNTIES AND PARISHES IN MORE THAN 100 METROPOLITAN AREAS DO NOT MEET THE NATIONAL AMBIENT AIR QUALITY STANDARDS FOR OZONE AND/OR CARBON MONOXIDE. THIS IS THE CASE DESPITE THE FACT THAT MANY OF THESE AREAS HAVE MADE BONA FIDE AND SIGNIFICANT EFFORTS TO CONTROL EMISSIONS FROM BOTH STATIONARY AND MOBILE SOURCES. FOR THESE AREAS, WE LOOK TO THE CONGRESS FOR THE

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*ESTABLISHED IN 1935, THE NATIONAL ASSOCIATION OF COUNTIES IS THE ONLY NATIONAL ORGANIZATION REPRESENTING COUNTY GOVERNMENT IN THE UNITED STATES. THROUGH ITS MEMBERSHIP, URBAN, SUBURBAN AND RURAL COUNTIES JOIN TOGETHER TO BUILD EFFECTIVE RESPONSIVE COUNTY GOVERNMENT. THE GOALS OF THE ORGANIZATION ARE TO: IMPROVE COUNTY GOVERNMENT; SERVE AS THE NATIONAL SPOKESMAN FOR COUNTY GOVERNMENT; ACT AS A LIAISON BETWEEN THE NATION'S COUNTIES AND OTHER LEVELS OF GOVERNMENT; ACHIEVE PUBLIC UNDERSTANDING OF THE ROLE OF COUNTIES IN THE FEDERAL SYSTEM.

ENACTMENT OF A PROGRAM THAT DOES MORE THAN MERELY EXTEND THE DEADLINES YET AGAIN.

NACo's LONGSTANDING POLICY, AS EXPRESSED IN OUR AMERICAN COUNTY PLATFORM, SUPPORTS THE DEVELOPMENT OF A NEW NATIONAL CLEAN AIR STRATEGY THAT ADDRESSES THE VARIABLE NATURE OF THE PROBLEM AND PRESCRIBES A RANGE OF APPROPRIATE SOLUTIONS INCLUDING STRONG MOBILE SOURCE PROVISIONS. AT OUR ANNUAL NATIONAL CONFERENCE THIS PAST JULY, WE REVISED OUR POLICY ON CLEAN AIR TO REFLECT OUR HEIGHTENED CONCERN ABOUT THE CONTRIBUTION OF MOTOR VEHICLES TO CONTINUING AIR POLLUTION. WE NOW KNOW THAT CARS, TRUCKS AND OTHER MOBILE SOURCES ARE THE DOMINANT CAUSE OF AIR POLLUTION IN THE COUNTRY TODAY. THEY CAUSE 50% OF OUR HYDROCARBON POLLUTION, 34% OF OUR NITROGEN OXIDE POLLUTION, 75% OF OUR CARBON MONOXIDE POLLUTION, AND 50% OF THE CANCER DEATHS BLAMED ON AIR TOXICS.

THE FACT IS THAT IF WE ARE SERIOUS ABOUT CUTTING AIR POLLUTION, WE MUST DO MORE ABOUT CONTROLLING EMISSIONS FROM MOTOR VEHICLES. OUR NEWLY ENACTED RESOLUTION ON CLEAN AIR ACT DEADLINES SPECIFICALLY CALLS FOR STRENGTHENING THE MOTOR VEHICLE CONTROL PROGRAM BY INCREASING TAILPIPE STANDARDS FOR HYDROCARBONS, CARBON MONOXIDE, AND NITROGEN OXIDE EMISSIONS, BY DEVELOPING COLD START STANDARDS, BY REDUCING RUNNING LOSSES AND EVAPORATIVE EMISSIONS, AND BY PROMOTING INCREASED USE OF ALTERNATIVE FUELS. IN ADDITION, WE REVISED OUR PLATFORM LANGUAGE TO ADVOCATE IMPROVED INSPECTION AND MAINTENANCE PROGRAMS AND TO CALL FOR CERTIFICATION REQUIREMENTS BASED ON REAL LIFE DRIVING

CONDITIONS COVERING THE FULL USEFUL LIFE OF THE VEHICLES. A COPY OF THE APPROPRIATE SECTIONS OF OUR PLATFORM IS ATTACHED TO MY TESTIMONY, AND I RESPECTFULLY REQUEST THAT IT BE MADE A PART OF THE RECORD.

IN LINE WITH THIS NEW EMPHASIS IN OUR POLICY, WE ARE PLEASED TO SEE THAT S. 1630 IS DESIGNED TO DECREASE AUTOMOTIVE EMISSIONS BY 50% BY THE YEAR 2000. WE COMMEND YOU FOR PROVIDING NEW TAILPIPE STANDARDS FOR ALL TYPES OF VEHICLES, INCLUDING DIESEL-FUELED TRUCKS AND BUSES AND FOR PRESCRIBING A PROGRAM TO REDUCE EVAPORATIVE EMISSIONS AND RUNNING LOSSES. NACo ALSO SUPPORTS THE PROPOSAL FOR ENHANCED MOTOR VEHICLE INSPECTION AND MAINTENANCE AS A REQUIREMENT FOR MOST NONATTAINMENT AREAS.

AS YOU HAVE INDICATED, MR. CHAIRMAN, ALTHOUGH AUTO MANUFACTURERS HAVE MADE SIGNIFICANT PROGRESS OVER THE YEARS TO REDUCE EMISSIONS, THE INCREASE IN THE NUMBER OF VEHICLES AND IN VEHICLE MILES TRAVELED NECESSITATES A FURTHER, DRAMATIC DECREASE IN VEHICLE EMISSIONS. WE BELIEVE THAT MANY OF THE PROVISIONS OF S. 1630 WILL ACHIEVE THAT RESULT.

MR. CHAIRMAN, WE APPRECIATE THE FACT THAT YOU AND OTHER MEMBERS RESPONSIBLE FOR DRAFTING S. 1630 LISTENED TO THE CONCERNS THAT WE HAVE EXPRESSED OVER THE YEARS AND INCORPORATED MANY OF THEM INTO THE LEGISLATION AT HAND. THERE ARE SEVERAL SPECIFIC PROVISIONS THAT WE WISH TO HIGHLIGHT:

- WE AGREE WITH THE APPROACH IN S. 1630 FOR PHASED DEADLINE EXTENSIONS CONDITIONED ON THE ADOPTION OF SPECIFIC CONTROL MEASURES TO ASSURE THAT LOCALITIES MAKE CONTINUED PROGRESS TOWARD ACHIEVING THE OZONE AND CARBON MONOXIDE STANDARDS. THE REQUIREMENT FOR INTERIM EMISSIONS REDUCTIONS WILL HELP AREAS TRACK THEIR PROGRESS AND MAKE NEEDED MID-COURSE CORRECTIONS. ALONG WITH THIS, WE WANT TO SUGGEST THAT RESEARCH ON OZONE FORMATION AND CONTROL STRATEGIES SHOULD CONTINUE AND THAT AREAS SHOULD BE PERMITTED TO REVISE THEIR PLANS TO TAKE ADVANTAGE OF TECHNOLOGICAL BREAKTHROUGHS THAT ARE ACHIEVED.

- WE ARE PARTICULARLY PLEASED TO SEE THAT THE BILL HAS REPLACED THE EXISTING COUNTERPRODUCTIVE NONATTAINMENT SANCTIONS WITH A POSITIVE REQUIREMENT THAT THOSE FAILING TO ATTAIN MUST DO MORE TO CLEAN UP THEIR AIR. AREAS THAT DO NOT MEET THE CLEAN AIR STANDARDS DESPITE THE GOOD FAITH IMPLEMENTATION OF THEIR APPROVED PLANS ARE APPROPRIATELY MOVED INTO THE NEXT HIGHER NONATTAINMENT CATEGORY AND REQUIRED TO IMPLEMENT ALL OF THE ASSOCIATED CONTROL MEASURES.

- WE DO WANT TO RAISE QUESTIONS ABOUT THE REQUIREMENTS FOR HIGHER EMISSIONS FEES ON STATIONARY SOURCES IN AREAS FAILING TO REACH ATTAINMENT. SINCE THE NONATTAINMENT PROBLEM MAY BE DUE PRIMARILY TO MOBILE SOURCES (AS WILL PROBABLY BE THE CASE IN THE WASHINGTON, D. C. AREA) OR TO A TRANSPORT PROBLEM, A POLICY OF EXACTING A PENALTY FROM STATIONARY SOURCES MAY BE INEFFECTIVE, AS WELL AS UNFAIR, IN MANY SOME INSTANCES.

- WE BELIEVE THAT YOU SHOULD RETAIN THE PROVISIONS OF CURRENT LAW EXEMPTING RESOURCE RECOVERY PLANTS FROM ANY

CONSTRUCTION BAN SANCTIONS THAT MIGHT BE IMPOSED. INCLUDING THESE FACILITIES IN THE CONSTRUCTION BAN ONLY SERVES TO EXACERBATE ANOTHER SERIOUS ENVIRONMENTAL PROBLEM WHILE NOT NECESSARILY CONTRIBUTING TO CLEANER AIR

- AS WE HAVE ALREADY DISCUSSED, WE AGREE THAT S. 1630 APPROPRIATELY EMPHASIZES THE ROLE OF MOBILE SOURCES OF POLLUTION, PARTICULARLY IN URBAN AREAS. IT IS THESE PROVISIONS OF THE BILL THAT ARE PARTICULARLY PREFERABLE TO S. 1490, THE PRESIDENT'S CLEAN AIR BILL. THE EMISSIONS STANDARDS OF S. 1490 ARE NOT STRONG ENOUGH. WE OPPPOSE ENGINE FAMILY AVERAGING AS A STEP BACKWARDS, AND WE ARE CONCERNED ABOUT THE EXCESSIVE RELIANCE ON AN UNCERTAIN ALTERNATIVE FUELS STRATEGY. HOWEVER, WE DO BELIEVE THAT THIS NATION SHOULD BEGIN TO MOVE MORE AGGRESSIVELY TOWARD THE USE OF ALTERNATIVE FUELS. THEREFORE, WE THINK THAT S. 1630 SHOULD DO MORE TO PROVIDE INCENTIVES TO BOTH THE AUTO AND THE PETROLEUM INDUSTRIES TO MAKE WIDESPREAD USE OF ALTERNATIVE FUELS INTO A COMMERCIAL REALITY.

- ALTHOUGH TRANSPORTATION CONTROL MEASURES ARE THE OTHER SIDE OF THE MOBILE SOURCE CONTROL COIN, WE BELIEVE THAT THE STRONG EMPHASIS ON THESE MEASURES IN S. 1630 DOES NOT MAKE ADEQUATE ALLOWANCES FOR THE LACK OF TRANSPORTATION ALTERNATIVES, PARTICULARLY IN MANY SUBURBAN AREAS WHERE MASS TRANSPORTATION IS NONEXISTENT AND CAR-POOLING ON A GRAND SCALE IS UNREALISTIC.

- WE WANT TO VOICE OUR SUPPORT FOR THE PROVISIONS REQUIRING THE FEDERAL GOVERNMENT TO PROMULGATE ADDITIONAL FEDERAL MEASURES ON A SPECIFIED SCHEDULE. WE THINK THAT THIS IS PREFERABLE TO THE APPROACH IN S. 1490 WHICH MERELY GIVES EPA THE

AUTHORITY TO DEVELOP THESE MEASURES AT ITS DISCRETION. WE ARE CONCERNED, HOWEVER, THAT EVEN IN S. 1630 EPA IS GIVEN TOO MUCH TIME TO ADDRESS THE PROBLEM OF CONSUMER PRODUCTS EMITTING OZONE PRECURSORS. THESE PRODUCTS PRESUMABLY INCLUDE CONSUMER AND COMMERCIAL SOLVENTS AND ARCHITECTURAL COATINGS. SINCE THEY ARE IMPORTANT SOURCES OF VOC EMISSIONS, EPA SHOULD BE REQUIRED TO TAKE MORE EXPEDITIOUS ACTION TO CONTROL THEM AND TO ACHIEVE GREATER REDUCTIONS THAN THOSE SPECIFIED IN THE BILL.

- WE AGREE WITH THE GENERAL APPROACH OF S. 1630 WITH RESPECT TO THE ESTABLISHMENT OF OZONE TRANSPORT REGIONS. HOWEVER, WE WOULD SUGGEST THAT YOU CONSIDER SPECIAL RULES FOR RURAL OZONE TRANSPORT RECIPIENT AREAS, ALLOWING THE EPA ADMINISTRATOR TO MAKE EXCEPTIONS WHERE HE FINDS THAT RURAL-BASED SOURCES WITHIN THE AREA DO NOT MAKE A SIGNIFICANT CONTRIBUTION TO THE OZONE PROBLEM IN THAT AREA.

MR. CHAIRMAN, WE THINK THAT YOU AND THE STAFF OF THE SUBCOMMITTEE DID A FINE JOB IN THE DEVELOPMENT OF S. 1630. INDEED, IN CONTRAST TO PREVIOUS YEARS, IT IS GRATIFYING TO SEE BOTH HOUSES OF CONGRESS AND THE ADMINISTRATION MAKING SERIOUS AND CONSTRUCTIVE EFFORTS TO WORK TOGETHER TO CRAFT LEGISLATION THAT WILL HOPEFULLY FINALLY RESULT IN THE ACHIEVEMENT OF OUR LONG TERM CLEAN AIR GOAL. THE MEMBERS OF THE NATIONAL ASSOCIATION OF COUNTIES LOOK FORWARD TO WORKING WITH YOU TO INSURE THE ENACTMENT OF STRONG AND EFFECTIVE CLEAN AIR LEGISLATION IN THIS CONGRESS.

I APPRECIATE THE OPPORTUNITY TO PRESENT THE VIEWS OF THE MEMBERS OF THE NATIONAL ASSOCIATION OF COUNTIES AND TO EXPRESS OUR SUPPORT FOR MANY OF THE PROVISIONS OF S. 1630. I WOULD BE PLEASED TO ANSWER ANY QUESTIONS THAT YOU OR THE MEMBERS OF THE SUBCOMMITTEE MIGHT HAVE.

# The American County Platform

## and Resolutions

## 1989-1990

NATIONAL
ASSOCIATION
of
COUNTIES
440 First Street N.W.
Washington D.C. 20001

# ENVIRONMENT, ENERGY & LAND USE
# STEERING COMMITTEE
# RESOLUTION ON CLEAN AIR ACT DEADLINES

WHEREAS, the National Association of Counties has given strong support to the Clean Air Act as a vital tool in achieving national air quality goals; and

WHEREAS, the National Association of Counties has endorsed the use of sanctions for areas failing to make a good faith effort to attain ambient air quality standards within the deadlines set forth in the Act; and

WHEREAS, there were 100 million persons living in counties which were not in compliance with ozone and/or carbon monoxide standards in 1987 (based on 1980 population); and

WHEREAS, many of these areas, despite good faith efforts, were not able to achieve the standards for ozone and carbon monoxide by the December 31, 1987 deadline; and

WHEREAS, in many areas attainment of the ozone standards will not be possible without greater understanding and attention to regional transport of ozone forming chemicals; and

WHEREAS, the Clean Air Act does not set forth ozone and carbon monoxide programs which extend beyond 1987, and does not have provisions for such areas, other than sanctions imposed by the Environmental Protection Agency or by the courts as a result of citizen suits:

THEREFORE BE IT RESOLVED, that the National Association of Counties urges Congress to amend the Clean Air Act before the end of the 101st Congress. Such amendments should provide for a sensible and orderly long-range strategy for air quality improvements and attainment of federal health air quality standards, including the following:

1. Extended deadlines for attainment of ozone and carbon monoxide standards for those counties making a good faith effort to comply with the standards;

2. Sanctions on those entities for failure to try but not sanctions for trying and failing to be in attainment;

3. Appropriate measures and procedures (including positive and financial incentives) to insure continued progress toward achieving national air quality goals;

4. Strengthening the motor vehicle control program by increasing tailpipe standards for hydrocarbons, carbon monoxide, and nitrogen oxide emissions, by developing cold start standards, by reducing running losses and evaporative emmissions, and by promoting increased use of alternative fuels;

5. Development of a more effective control strategy with attention to regional transport issues; and

6. A program to educate citizens on the serious health hazards posed by polluted air.

Adopted, July 18, 1989

# ENVIRONMENT, ENERGY, AND LAND USE STEERING COMMITTEE PROPOSED AMENDMENT

## 4.3 AIR QUALITY

* * * *

4.3.6 Motor Vehicle Contamination - NACo urges the federal government to enforce *tougher* motor vehicle emissions standards. Controlling these emissions is the most effective means to reduce transportation related pollutants. *NACo supports* programs to reduce vehicle miles travelled, including, but not limited to, mass transit and carpools. NACo encourages the production of lower pollution vehicles *including:*

*A. Alternative fuel vehicles, however, federal policy must be established to ensure the availability of a refueling infrastructure and of competitively priced, reliable alternative fuel and alternative fuel vehicles before requiring conversion of motor vehicle fleets. Federal policy regarding alternative fuels should take into account its impact on gas tax revenues and the highway trust fund.*

*B. Vehicles designed and operated to reduce evaporative emissions during refueling and operation (running losses).*

* * * *

4.3.7 Vehicle *Certification* Inspection and Maintenance - NACo believes that *improved* vehicle *certification and* inspection-maintenance programs can reduce hydrocarbon, and carbon monoxide *and other pollutant* emissions from vehicles in use. *Certification requirements should be based on real life driving conditions including, but not limited to cold start temperatures, and should cover the full useful life of the vehicles. EPA should establish uniform guidance for enhanced Inspection and Maintenance programs.*

* * * *

# TESTIMONY OF THE HONORABLE FEDERICO PENA
MAYOR OF DENVER, COLORADO
ON
OZONE, CARBON MONOXIDE, AND PARTICULATE NON-ATTAINMENT

REPRESENTING
THE CITY AND COUNTY OF DENVER,
THE NATIONAL LEAGUE OF CITIES, AND
THE U.S. CONFERENCE OF MAYORS

BEFORE THE HEARING OF THE
SUBCOMMITTEE ON ENVIRONMENTAL PROTECTION,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
UNITED STATES SENATE

SEPTEMBER 27, 1989

Mr. Chairman, members of the subcommittee: I am Federico Pena, Mayor of Denver, Colorado. I am here today to testify on behalf of the 16,000 cities and towns represented by the National League of Cities and on behalf of the United States Conference of Mayors. I want to discuss with you the effort which is needed to bring our nation's cities and towns into attainment with federal health-based clean air standards especialy the more than 400 municipalities in the 100 metropolitan areas that have been unable to attain the National Ambient Air Quality Standards for ozone, carbon monoxide and partuculate matter. I am also speaking to you as the Mayor of Denver, a city which currently exceeds those standards for two pollutants, carbon monoxide (CO) and particulates (PM-10). This spring we were removed from the list of areas in non-attainment for ozone, but still need to file a State Implementation Plan (SIP) in order to demonstrate our ability to maintain the standard. As I go through my testimony I will note when the positions taken are solely my own.

Reauthorization of the Clean Air Act is one of the top priorities for both the National League of Cities and the U.S. Conference of Mayors and clearly for the City of Denver as well. It is essential for Congress to address the questions of deadlines and sanctions that are facing our nation's cities and towns -- most of which have made significant efforts and expended considerable scarce local resources to come into compliance with the national standards -- that will not attain the National Ambient Air Quality Standards.

First, Mr. Chairman, I believe all parties -- the Senate, the House, and the Administration -- are to be commended for their efforts to develop workable legislation to deal with the intractable problems of air pollution facing many of our Nation's cities and towns. It is clear that consensus, or near-consensus, exists on a number of broad issues, issues with which the Conference of Mayors and the National League of Cities agree.

Second, I wish to express the thanks of the National League of Cities and the Conference of Mayors to you and your staff, not only for your on-going interest in our concerns about implementing appropriate clean air standards, but also for hearing and addressing those concerns in many important ways in the proposed legislation.

Because of our pollution problems, air pollution continues to be a serious threat to the health of our citizens and the welfare of our communities. In Denver, every poll taken over the past five years has indicated that air pollution is one of the top issues facing the region. The most recent poll released last April by the Governor's Office showed over 79% of the state population is willing to pay over $6.00 per month more for goods and services to improve air quality. In Denver, air quality is not only a health issue, but an economic development issue as well. A poll taken a couple of years ago of 65 Fortune 500 companies found that a majority say Denver's air quality would negatively effect any business relocation decisions they might make.

The Denver area has made dramatic improvements in our carbon monoxide levels over the past several years. In the early 1970's, we violated the CO standard nearly 150 days per year. In 1983 we still violated the standard 53 times. In 1988, in large part due to the federal Motor Vehicle Emissions Control program for new cars and local initiatives like strengthened inspection/maintenance, oxygenated fuels, and wood burning restrictions, we violated the standard only 8 days in the Central Business District. However, the innovative measures adopted by this region will not by themselves assure attainment and maintenance of the ambient air standards without help at the federal level.

For these reasons, I along with the National League of Cities and the Conference of Mayors seek federal legislation which will ensure compliance in a fair, equitable and timely manner. During the last session of Congress I had the opportunity to address this subcommittee about many of these issues. I attach that March 1987 testimony for your information. Also attached are the comprehensive policies as adopted by the National League of Cities and the Conference of Mayors. I want to briefly talk about several of the issues concerning Denver and other cities throughout the nation. They include monitoring and inventory; deadlines and sanctions; mobile source controls; and controls on sources contributing to ozone.

In reviewing both S. 1490 and S. 1630, with few exceptions, the provisions in S. 1630 appear more consistent with League and

Conference policy. Let me be specific. One of the problems many cities have faced in reaching attainment is the lack of reliable data, particularly in developing complete emissions inventories. This legislation needs to direct the Environmental Protection Agency (EPA) to develop complete guidelines for states and localities for monitoring and inventories. Followed properly, this better data would allow cities to file more complete and accurate implementation plans (SIPs).

Second, for cities, deadlines and sanctions provisions need to be fair, reasonable and timely. Let me take the deadlines first. Both the Administration and the subcommittee bills have based attainment deadlines on an appropriate philosophy; those farther from attainment are allowed a longer period of time to reach attainment but must also implement more federally-prescribed requirements. Prescribing more measures for areas which get longer extensions is an appropriate balance.

It is reasonable to expect virtually all areas to reach attainment of the CO standard within ten to twelve years. In Colorado, we think we can reach attainment in five or six years. However, some of the more severely nonattainment areas believe it will take more than 15 years to reach the national ambient air quality standards.' As we read S. 1630, only the Los Angeles area will have its deadline for attainment extended 20 years. We believe the bill should incorporate the same time frames for some of the other more severely impacted areas of the nation, as is provided for in S. 1490.

Sanctions are also very important to Denver and other non-attainment cities. Sanctions are generally imposed when they should be in the committee bill and the administration bill. However, sanctions should not be discretionary for failure to file a plan or implement a plan, as in the Administration's proposal. Under no circumstances should State air grants be withheld. That sanction is totally counter-productive and should be removed. We also detest the ban on drinking water hook-ups in the Administration bill.

The PM-10 standard will be more difficult for many areas than the CO standard, including Denver. It will be difficult to reach the standard in 10 years, if only because less is known about PM-10 and the effectiveness of various control strategies. Our policies seeks the consideration of severity of the problem as a measure for reaching compliance; more severe areas will need greater time to comply.

The subcommittee's proposal for a permit system for new and existing sources, coupled with the offset requirements will help areas better determine the extent of the problem, allows for revenues to be raised to pay for the necessary clean air work, and through the offsets, requires economic growth to improve air quality.

Both the League and the Conference support enhanced inspection/maintenance programs work and support it as a requirement in the committee bill. It has worked in Colorado for

THE PAST TWO YEARS WITHOUT ANY MAJOR PROBLEMS. IT HAS ALSO WORKED WELL IN ARIZONA AND OTHER REGIONS OF THE COUNTRY.

ALSO, THE CONFERENCE AND THE LEAGUE BELIEVE STAGE II VAPOR RECOVERY WILL PROVIDE FOR MAJOR, NECESSARY REDUCTIONS IN EVAPORATIVE EMISSIONS. THIS STRATEGY IS REASONABLY AVAILABLE NOW, AS EVIDENCED BY ITS USE IN SEVERAL PARTS OF THE COUNTRY.

WHILE SOME MAY PERCEIVE THE ADMINISTRATION'S BILL TO BE "HEAVY-HANDED" IN DEALING WITH THE DEVELOPMENT AND AVAILABILITY OF ALTERNATIVE-FUELED VEHICLES, WE BELIEVE IT IS NECESSARY TO ENCOURAGE INNOVATIONS IN REDUCING POLLUTION FROM MOBILE SOURCES.

AS WE UNDERSTAND THE PROVISIONS OF S. 1490, THE ONES FOR INSURING THE SALE OF ALTERNATIVE, DUAL-FUELED VEHICLES IS PUT ON THE AUTOMOBILE MANUFACTURER. NO COMPARABLE BURDEN IS PLACED ON FUEL PROVIDERS TO INSURE THE AVAILABILITY OF ALTERNATIVE FUELS. NOR IS THERE ANY MECHANISM TO INSURE THAT OWNERS OF THESE DUAL-FUELED VEHICLES USE THE LESS POLLUTING FUELS.

IT IS ALSO UNCLEAR HOW AND WHETHER REDUCTIONS OF EMISSIONS FROM THESE VEHICLES CAN OR WILL BE COUNTED IN REACHING THE REQUIRED PERCENT REDUCTION MILESTONES IN THE SPECIFIED NONATTAINMENT AREAS.

WHILE WE NEED TO WORK THROUGH SOME OF THESE ISSUES MORE THOROUGHLY, WE WOULD GENERALLY SUPPORT STRONGER PROVISIONS ON ALTERNATIVE FUELED VEHICLES THAN ARE IN S. 1630.

FOR DENVER, MANDATING THE USE OF OXYGENATED FUELS FOR CO AREAS IS AN IMPORTANT REDUCTION STRATEGY. I SUPPORT THE ESTABLISHMENT OF A SPECIFIC OXYGENATE STANDARD, WHICH IS NOT IN

THE ADMINISTRATION BILL. A 3.1% AVERAGE OXYGEN STANDARD IS REASONABLE. I DO HAVE ONE CRITICISM ABOUT THE COMMITTEE PROVISION. REQUIRING OXY FUELS FROM OCTOBER 1 TO MARCH 31 IS TOO LONG FOR DENVER. IN DENVER, WE DO NOT VIOLATE THE CO STANDARD IN OCTOBER OR MARCH. THE PROVISION SHOULD BE REWRITTEN TO COVER ONLY THE MONTHS WHERE VIOLATIONS HAVE OCCURRED IN THE PAST IN THAT REGION. OTHERWISE YOU HAVE PUT AN UNNECESSARY EXPENSE ON CONSUMERS FOR NO AIR QUALITY BENEFIT.

ONE OTHER AREA SUPPORTED BY NATIONAL LEAGUE OF CITIES AND CONFERENCE OF MAYORS' POLICY ADDRESSES MOBILE SOURCE CONTROLS. ADDITIONAL ACTION IS ABSOLUTELY CRITICAL TO DENVER AND MOST OTHER NON-ATTAINMENT CITIES. IN DENVER, 85% OF OUR CO PROBLEM AND ABOUT 50% OF OUR PARTICULATE PROBLEM IS VEHICLE-RELATED. TAILPIPE CONTROLS ARE ONE OF THE MOST COST-EFFECTIVE STRATEGIES FOR DENVER RESIDENTS. AUTOMOBILE EMISSIONS CONTROLS HAVE PROVEN EFFECTIVE AND TIGHTER EMISSIONS STANDARDS FOR MOBILE SOURCES ARE ACHIEVABLE AND HAVE BEEN PROVEN IN PRACTICE.

THERE ARE SEVERAL PROVISIONS I WANT TO SPEAK TO SPECIFICALLY. THE FIRST IS THE EXTENSION OF THE USEFUL LIFE REQUIREMENT OF LIGHT DUTY ENGINES AND VEHICLES TO 10 YEAR/ 100,000 MILES. WITH THE HIGHER STICKER PRICES FOR NEW CARS, FLEET TURNOVER HAS SLOWED AND THE 5 YEAR/50,000 MILE PROVISION IS NOW OBSOLETE. THIS CHANGE PROVIDES FOR THE SIGNIFICANT BENEFITS FOR ALL POLLUTANTS.

SECOND, COLD START REQUIREMENTS ARE ESSENTIAL TO DENVER AND OTHER COLD WEATHER CITIES WITH CO PROBLEMS. YOUR PROVISIONS WILL

HELP OUR PROBLEMS. A 10 GRAM/MILE STANDARD AT 20 F IS AN IMPROVEMENT. IF THAT STANDARD IS APPLIED AS AN AVERAGE, AS IN THE ADMINISTRATION BILL, IT IS NOT AN IMPROVEMENT.

THIRD, THE REQUIREMENT OF ONBOARD DIAGNOSTICS WILL ALSO HELP.

FINALLY, THE ACROSS-THE-BOARD TIGHTENING OF THE TAILPIPE STANDARDS PROPOSED BY THE COMMITTEE IS IMPORTANT AND WORTH SUPPORTING. IT WILL HELP DENVER AND ALL OTHER CITIES REDUCE ALL THE CRITERIA POLLUTANTS. ONE THING THAT IS IMPORTANT TO REMEMBER IS THAT WITH EACH DELAY OF THE MODEL YEAR IMPLEMENTATION DATE, THAT DIRTIER CAR WILL BE ON THE ROAD FOR TWELVE MORE YEARS BEFORE IT IS REPLACED. YOU NEED TO PREVENT THE MODEL YEAR REQUIREMENTS FROM SLIPPING AT ALL. IN FACT, I WANT YOU TO MOVE UP THE 2003 DATE FOR TOUGHER CO TAILPIPE STANDARDS.

I HAVE INCLUDED IN MY WRITTEN TESTIMONY A COPY OF MY CONCERNS ABOUT HOW THE ADMINISTRATION BILL, S. 1490, WILL AFFECT OUR EFFORTS IN DENVER. I HOPE THAT MY ANALYSIS OF THAT BILL WILL HELP YOU DETERMINE SOME OF ITS WEAKNESSES AND GIVE SOME GUIDANCE ON HOW IT MAY BE IMPROVED. SOME OF THE SUGGESTIONS NEED TO BE INCORPORATED INTO THE SUBCOMMITTEE BILL.

THE LEAGUE, THE CONFERENCE, AND I LOOK FORWARD TO WORKING WITH MEMBERS OF THE SUBCOMMITTEE AND OTHERS IN THE CONGRESS AND ADMINISTRATION TO ADOPT CLEAN AIR ACT AMENDMENTS WHICH WILL HELP OUR NATIONS' CITIES AND TOWNS ACHIEVE CLEAN AIR. THANK YOU.

*Federico Peña*
MAYOR

*City and County of Denver*
CITY AND COUNTY BUILDING • DENVER, COLORADO • 80202
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## ISSUES REGARDING CLEAN AIR ACT AMENDMENTS BY HR3030 AND S1490
## CITY AND COUNTY OF DENVER
## MAYOR FEDERICO PEÑA

SEPTEMBER 12, 1989

Overall, the Administration proposals contained in HR3030 and S1490 offer a positive framework for amending the Clean Air Act. The Administration, and the legislative sponsors of these and the other proposal bills are to be commended for their hard work and the desire to provide for clean air throughout the nation. There are several issues still to be resolved which concern the City and County of Denver and the entire Denver metropolitan area.

### SANCTIONS, DEADLINES, PLANNING TIME FRAMES

Denver has consistently argued for mandatory sanctions in areas which fail to file adequate SIPs (State Implementation Plans) or which fail to implement commitments made in the SIPs. Sanctions should be automatic in these cases, not discretionary. The current discretionary system has created inequities where areas which have not acted in good faith are not sanctioned anymore than those which have acted in good faith.

Secondly, the sanctions are not appropriate. Imposing drinking water hook-up bans or withholding air quality grants are not appropriate. It does not make sense for us to create other environmental problems to solve air quality problems. Also, requiring offsets as a sanction would actually help improve air quality and should be considered as a sanction instead of construction bans. This is preferable to banning growth through the drinking water sanction.

If an area fails to file a SIP, the EPA should be required to complete a FIP. This threat of federal action is necessary to ensure that good SIP's are filed and commitments are honored.

Finally, the planning period of 3 years for a new SIP for areas which fail to attain is too long. Any region can develop a SIP in less than 3 years if they have tried to implement a previous SIP.

AVERAGING CONCEPT ON EMISSIONS STANDARDS

I am not opposed to the concept of averaging if the standards are in fact, lowered and certain questions can be resolved. Averaging, a concept used in the CAFE (Corporate Average Fuel Economy) standards, allows the automobile industry to meet the clean air requirements in a cost effective manner. Two questions need to be resolved. First, how does this concept effect recall provisions? Second, how does this effect the warranty provisions for the individual car owner?

However, as the bills currently are drafted, actual carbon monoxide would rise. Right now new cars, as a fleet, average CO emissions of 2.7 grams/mile. The bills would allow this level to rise to 3.4 grams/miles. This would mean a net increase of CO emissions from new cars. This works similarly for other pollutants. If the standard was lowered to 1.5 or 2.0 gram/miles, then, even with averaging, a net improvement is air quality emissions would result.

EMISSION STANDARDS

Mobile source emissions contribute 75 percent of the carbon monoxide pollution in the metro area and about 50 percent of the brown cloud. In order to reduce these pollutants the Denver area needs significant controls on new car emissions. At a minimum the emissions levels should be equal to that adopted in California which will be effective in 1993. Seven northeast states have begun the process to adopt the California standards. These standards should be the baseline, with some standards even lower.

Specifically, the automobile emission standard for CO should be lowered from 3.4 grams/mile to 1.5-2.0 grams/mile. This is particularly important due to the averaging concept, as noted earlier.

The CO cold start standard of 10 grams/mile at 20° F, with averaging, is met by the current fleet of new cars according to the Colorado Department of Health (CDH). If averaging is to be used then the standard should be changed to 6 grams/mile at 20° F.

Based on modeling done by CDH, the most effective measure for reducing CO and brown cloud contributors would be to extend the useful life requirement to 10 years/100,000 miles, as will be the case in California.

Another important provision contained in the California standard and omitted from HR3030 and S1490 is the use of on-board diagnostics which notify the car owner of failing emissions control systems and parts. This also will help operators of inspection and maintenance programs determine failed systems in the new, computer-controlled emissions systems.

The nitrogen oxide (NOx) and hydrocarbon (HC) standards need to be changed so they are as stringent as in California. These changes are needed for ozone and PM-10 (particulate) compliance throughout the U.S.

Light-duty trucks under 3750 pounds gross vehicle weight are essentially the same technology as cars but with a truck body. These vehicles should be required to meet the same standards as automobiles. Light-duty trucks in the Denver area are responsible for 35 percent of the vehicle miles travelled and additional controls are needed.

The 1991 urban bus standards are controversial and difficult for manufacturers to make. However, it is unclear that these standards need to be rolled back all the way to 1994. Since EPA already has authority to postpone the standard through rule-making it does not make sense to roll back all the way to 1994 in Clean Air Act amendments. The bus standard changes should be deleted completely and the EPA should act on the American Public Transit Association (APTA) petition.

Finally, I am also concerned that the draft language would allow for heavy-duty truck standards to slip significantly and off-road vehicles and motors could be postponed indefinitely. These sources are major contributors to the PM-10 problem in Denver and our brown cloud. Additionally, these emissions represent a significant health concern.

These issues do not represent all my concerns about emission standards, but are the major priorities for Denver. Without these changes it will be difficult for the Denver area to maintain clean air standards once we reach attainment in the 1990's.

## DIESEL AND GASOLINE FUELS

There are four issues I have regarding diesel and gasoline fuels. First, the diesel fuel regulation requires fuel to be 0.05 percent sulphur by weight or a cetane index of 40. This differs from the proposed regulation EPA published in the federal register last month. That regulation said 0.05 percent sulphur and a 40 cetane index. This single word difference is critical. All diesel fuel in Colorado would meet the requirement in the statutory language without any improvement. This would not be the case regarding the proposed regulation; fuel would have to be improved. Since statutory law takes precedent over regulatory law, the weaker standard would apply.

Additionally, research done by CDH demonstrates conclusively that controlling aromatics is essential in reducing diesel emissions. Aromatic standards similar to those recently adopted in California should be included.

Thirdly, I am concerned that the oxygenated fuels provision for serious CO non-attainment cities does not require a minimum oxygen content standard. Since most gasoline contains some level of MTBE (an octane booster and an oxygenate) every area could claim an oxy-fuels program already exists and not have to require higher levels of oxygen. I suggest an average content requirement of 3.1 percent oxygen be included in the statute.

Finally, I am very concerned about the broad preemption language for state and local action regulating fuels. All of the innovation is this area has been forced by state and local action. Preempting this in the future means additional progress in this area will be halted. All preemption language should be removed.

## CLEAN FUELS

I have two concerns here. First, the loopholes in the clean fuel requirements allowing for cities and industry to opt out need to be narrowed or eliminated if this requirement is to have any real teeth.

Secondly, a clean fuel should be defined, not just by its impact on hydro carbons, but on NOx, PM-10, and CO. The fuel should not be allowed to increase the emissions of any of these pollutants.

## CONCLUSIONS

These concerns are not meant to be totally inclusive, but rather, represent a starting point for improving HR3030 and S1490. We have a good base to start from and with these additions Denver and all other cities would find attainment and maintenance of clean air standards to be, not just possible, but a reality.

I am sure other cities and organizations have additional suggestions for further improvements. I have only highlighted some of the issues. Please feel free to contact me about any of these or other issues.

STAPPA / ALAPCO

STATE AND TERRITORIAL
AIR POLLUTION PROGRAM
ADMINISTRATORS

ASSOCIATION OF
LOCAL AIR POLLUTION
CONTROL OFFICIALS

S. WILLIAM BECKER
EXECUTIVE DIRECTOR

TESTIMONY OF

DONALD F. THEILER

DIRECTOR, WISCONSIN BUREAU OF AIR MANAGEMENT

ON BEHALF OF THE

STATE AND TERRITORIAL AIR POLLUTION PROGRAM ADMINISTRATORS

AND THE

ASSOCIATION OF LOCAL AIR POLLUTION CONTROL OFFICIALS

ON S. 1630

BEFORE THE

SENATE ENVIRONMENT AND PUBLIC WORKS SUBCOMMITTEE ON
ENVIRONMENTAL PROTECTION

SEPTEMBER 27, 1989

444 NORTH CAPITOL ST. N.W. WASHINGTON, D.C. 20001 202-624-7864

# Testimony of
# Donald F. Theiler
Director, Wisconsin Bureau of Air Management
on behalf of the
State and Territorial Air Pollution Program Administrators
and the
Association of Local Air Pollution Control Officials
on S. 1630
before the
Senate Environment and Public Works Subcommittee on
Environmental Protection

September 27, 1989

Chairman Baucus, Members of the Subcommittee, my name is Donald F. Theiler, and I am the Director of the Wisconsin Bureau of Air Management. I appear before you today on behalf of STAPPA--the State and Territorial Air Pollution Program Administrators--of which I am President, and ALAPCO--the Association of Local Air Pollution Control Officials.

STAPPA and ALAPCO are the two national associations of air pollution control agencies in the 54 states and territories and more than 165 major metropolitan areas across the United States. The members of our associations are directly responsible for implementing this nation's air pollution control laws and regulations; our primary goal is to provide our citizens with clean, healthy air. On behalf of both STAPPA and ALAPCO, I thank you for inviting me to testify on S. 1630, legislation currently being considered by this Subcommittee to attain and maintain the National Ambient Air Quality Standards; indeed, few issues today are as critical as this.

## EXTENT OF THE PROBLEM

Nonattainment of the health-based National Ambient Air Quality Standards for ozone, carbon monoxide and particulate matter represents a pervasive and intractable problem in this country.

In much of the United States, the summer of 1988 was the worst ozone season of the past decade, with many areas of the country, particularly those east of the Mississippi River, experiencing record-setting ozone levels. Twenty-eight new areas violated the national ozone standard last year, increasing the number of nonattainment areas to almost 100 and the number of citizens potentially exposed to unhealthy air to over 130 million. The frequency of exceedances of the ozone standard, coupled with the level of exceedances experienced, vividly illustrates the severity of the 1988 ozone season.

In 1988, a majority of monitors recorded more violations of the ozone standard than in either 1983 or 1987--which, prior to last year, were considered to be the worst two years of the decade. In 1988, exceedances of the ozone standard occurred 60 percent more often than in 1983 and 90 percent more often than in 1987. In the northeast alone, the ozone standard was violated at least once every three days.

In addition to occurring frequently, exceedances of the ozone standard in 1988 occurred at extremely high concentrations as well. During 1988, two-thirds of all monitors recorded higher peak ozone concentrations than in 1983, while peak ozone concentrations at 80 percent of all monitors were higher than in 1987.

Even our beautiful and once pristine national parks are no longer able to escape the adverse environmental effects of polluted air. In the summer of 1988, both Acadia National Park in Maine and Shenandoah National Park in Virginia experienced multiple violations of the national ozone standard.

Preliminary air quality data for 1989, which indicate that ozone levels during this year's ozone season have not been as high as last year's, reflect the milder weather conditions experienced this year in many parts of the country. Nonetheless, a tremendous ozone nonattainment problem remains.

Exceedance of the national standard for carbon monoxide poses an equally persistent problem in many areas of our nation. According to EPA, 59 areas violate the carbon monoxide standard, jeopardizing the health of millions of our citizens.

Finally, EPA estimates that over 100 areas fail to attain the $PM_{10}$ standard, affecting as many as 60 million people, many of whom reside in sparsely populated areas. In fact, some of the highest $PM_{10}$ concentrations have occurred in communities of just 35,000 people, while exceedances of the $PM_{10}$ standard are monitored even in communities with as few as 5,000 residents.

## HEALTH EFFECTS

The National Ambient Air Quality Standards (NAAQS) were established for the purpose of protecting human health; the ever-increasing exceedances of these standards represent a very serious health threat.

The Environmental Protection Agency has reported that even healthy individuals who exercise outdoors when levels of ozone are at or slightly above the NAAQS can experience a variety of ailments, including chest pain, sore throat, decreased lung functioning, coughing, congestion, nausea and increased respiratory rate. These symptoms do not always subside when an ozone episode ends; studies have shown permanent lung damage may result from repeated and prolonged exposure to ozone. Furthermore, animal studies have revealed that susceptibility to severe respiratory infection results even when levels of ozone are as much as 50 percent below the standard.

Exposure to carbon monoxide prevents the delivery of oxygen to the body's tissues, thereby impeding aerobic capacity, learning ability, visual perception and manual dexterity. Although these health consequences are of concern to anyone living or working in our major cities, especially endangered are individuals who suffer from cardiovascular disease, children, pregnant women and fetuses. Particularly disturbing is the fact that, according to the American Lung Association, almost 40 percent of all pregnant women, and an equal number of individuals suffering from coronary disease, reside in carbon monoxide nonattainment areas.

Exposure to small airborne particles, such as those regulated by the $PM_{10}$ standard, can also pose a serious threat to human health. Small particles, when inhaled, breach the natural defenses of the respiratory system and invade the tracheobronchial regions and the deeper recesses of the lungs. Exposure may cause adverse effects on breathing and the respiratory system, particularly aggravation of existing respiratory and cardiovascular ailments, changes in the defense systems that protect the body against foreign matter, damage to lung tissue and even cancer and premature death. Although the extent of the damage to public health from particulate matter has not yet been fully measured, recent studies suggest that children in urban areas are suffering adverse effects. In addition to the very young, other sensitive groups more likely to suffer adverse health effects from exposure to particulate matter include the elderly and individuals with chronic obstructive pulmonary or cardiovascular disease, influenza, or asthma.

For the past eight years, the issues surrounding clean air legislation have been intensely debated; and for eight years a solution has remained elusive. This nation faces an air quality crisis of significant proportions. Each day, millions of Americans are threatened by the air they breathe. Now, more than ever before, it is imperative that Congress take action. Mr. Chairman, Members of the Subcommittee, STAPPA and ALAPCO applaud your leadership in developing legislation to address the country's ubiquitous nonattainment problem; we believe that S. 1630 is a fine piece of legislation.

While our comments today will focus on S. 1630, the associations note that the Administration has also taken action to address nonattainment and has included a control program in Title I of S. 1490; we are gratified by the President's acknowledgement of this issue. Attached to this statement are comprehensive comments on S. 1490, prepared by STAPPA and ALAPCO.

STAPPA and ALAPCO are particularly pleased that S. 1630 embodies many of the principles contained in our nonattainment control strategy, a copy of which is also attached to this statement.

We strongly support the structure of S. 1630, including provisions classifying nonattainment areas and establishing deadlines according to the severity of an area's air quality problem, requiring increasingly stringent control measures based upon an area's classification, prescribing a set of federal control measures and technology standards for previously uncontrolled sources, tightening the motor vehicle control program and addressing interstate transport of pollution. We are also pleased that the bill imposes sanctions only for failing to submit or implement a required plan, not for failing to attain the standards, despite good-faith efforts.

With respect to specific provisions of S. 1630, STAPPA and ALAPCO offer the following comments.

## OZONE NONATTAINMENT

### Designation and Deadlines

The approach taken in S. 1630 to address ozone nonattainment is supported by STAPPA and ALAPCO. We are pleased that the bill establishes four categories of ozone nonattainment--Moderate, Serious, Severe and Extreme--and identifies realistic attainment deadlines and requires progressively stringent controls and offsets for each.

### Requirements for Nonattainment Areas

STAPPA and ALAPCO agree that Moderate nonattainment areas should implement additional control measures to assist in attaining and maintaining the ozone standard. The associations concur that motor vehicle Inspection and Maintenance (I/M) and Stage II Vapor Recovery are two cost-effective cotrol programs that should be incorporated into states' air quality strategies. However, whereas S. 1630 requires that Moderate areas implement one or the other of these measures, we urge that both be required in all nonattainment areas. In fact, the associations recommend that all areas of the country, including attainment areas unable to demonstrate that they do not contribute to another area's nonattainment problem, be required to implement Reasonably Available Control Technology (RACT) on all major sources. With respect to I/M, we agree with the provisions in the bill that call for a performance-based standard for achieving reductions, but, based upon the diversity of programs nationwide, we question the appropriateness of requiring a specific tonnage reduction, rather than a percent reduction.

STAPPA and ALAPCO endorse the concept of requiring Serious, Severe and Extreme nonattainment areas to achieve a 12-percent reduction in emissions of volatile organic compounds every three years. The associations believe that there is considerable merit in defining reasonable further progress in terms of a required annual percentage reduction in emissions; such an approach represents a practical strategy for lowering ozone levels and will place necessary pressure on localities to reduce their emissions. Further, we favor an approach whereby ozone nonattainment areas will be evaluated based upon achievement of emission reductions, rather than upon attainment of the standard. In addition, we appreciate the bill's flexibility that allows areas to take credit for most control strategies and average emissions reductions over three-year periods. The associations do, however, recommend that the provision that disallows credit to be taken for reductions achieved through the implementation of fuel volatility regulations be deleted.

Finally, STAPPA and ALAPCO believe that, while modeling is a necessary component of a long-term solution to nonattainment, such exercises should not supercede the timely implementation of further controls. For this reason, the associations recommend that the three-year period for revising and submitting State Implementation Plans for ozone be extended to at least four years to allow for simultaneous improvement of inventories and models--upon which future SIPs will be based--and implementation of compliance strategies to reduce emissions.

**Federal Measures**

STAPPA and ALAPCO are gratified that the bill includes requirements for the issuance of Control Technique Guidelines (CTGs) for categories of stationary sources heretofore uncontrolled and promulgation of national emission standards; we believe this guidance will play a vital role in providing states and localities with important regulatory tools necessary to attain and maintain the standard.

We are extremely pleased that S. 1630 requires EPA to issue CTGs for at least 12 of the most significant categories of stationary sources. Our associations have, for some time, strongly encouraged EPA to promulgate such guidance defining Reasonably Available Control Technology. It is more cost-effective for one level of government--EPA--to develop these guidelines, than for 100 nonattainment areas to define these rules on their own. Moreover, experience has shown that state and local agencies have been far more successful in reducing VOC emissions when EPA has published CTGs. STAPPA and ALAPCO do, however, encourage this Subcommittee to accelerate the timeframe for issuing this important guidance.

The associations are particularly encouraged that S. 1630 requires EPA to publish a CTG regulating emissions of volatile organic compounds from loading or unloading of petroleum products onto or from vessels. In that emissions from such loadings contribute significantly to the ozone problem, we believe that it is appropriate to regulate them as direct emissions of the onshore terminal.

National emission standards for sources such as consumer and commercial solvents can also result in significant emissions reductions. Such standards, applicable nationwide, facilitate the control of sources which are difficult, if not impossible, to regulate on an area-by-area basis. The associations are, therefore, pleased that S. 1630 requires EPA to promulgate regulations for consumer and commercial solvents. We recommend, however, that this requirement be expanded to include regulations for architectural coatings, pesticide application, traffic coatings and military specification coatings.

With respect to both national emission standards and CTGs, we note that the bill does not include "hammer" or default provisions, to take effect in the event that EPA fails to act as required; we strongly urge that such provisions be added.

## Ozone Transport

STAPPA and ALAPCO are very supportive of the transport provisions included in S. 1630, which establish an ozone transport region--extending from Maine to Virginia--and specify a minimum level of controls. The associations strongly agree that it is important to require Reasonably Available Control Technology not only in all nonattainment areas, but also in those attainment areas that are unable to demonstrate they are not contributing to nonattainment problems elsewhere.

The associations also concur with the establishment of transport commissions, as well as with their authority to require additional control measures within a region, where appropriate. However, we suggest that in those instances where the states in the transport region unanimously agree on a control strategy for the area, EPA should be required to accept the strategy as a basis for SIP development, unless the agency can demonstrate that it will not result in attainment of the ozone standard by the established deadline. Further, while we support the bill's provision authorizing the EPA Administrator to establish additional regions, we recommend that S. 1630 specifically include a Lake Michigan transport region and commission, comprised of Illinois, Indiana, Michigan and Wisconsin.

## CARBON MONOXIDE NONATTAINMENT

### Designation and Deadlines

STAPPA and ALAPCO support the approach taken in S. 1630 for controlling carbon monoxide (CO). The associations believe the bill's classification of CO nonattainment areas into two categories, based upon the severity of their nonattainment problem, is appropriate and find the deadlines to be reasonable.

### Control Requirements for Carbon Monoxide Nonattainment Areas

STAPPA and ALAPCO are pleased with the control requirements for each CO nonattainment area classification, and, in particular, with the bill's provisions requiring that almost all CO nonattainment areas implement an enhanced motor vehicle inspection and Maintenance program. We also agree that all CO nonattainment areas should adopt an oxygenated fuels program, but recommend that the minimum oxygen content be lowered so that the program will be "fuel neutral." We suggest a 2.7 percent minimum oxygen content in all CO nonattainment areas with a design value above 11 parts per million, and a minimum of 2 percent for the remaining nonattainment areas. In addition, we support provisions in S. 1630 that call upon Serious CO nonattainment areas to implement transportation control measures and require employer ridership programs.

STAPPA and ALAPCO support the provisions in S. 1630 requiring that areas achieve "quantitative milestones" in order to demonstrate reasonable further progress toward attainment. We believe this requirement will place considerable and necessary pressure on areas to attain the CO standard in an expeditious manner. However, while such milestones may be appropriate for most CO nonattainment areas, achievement may be more difficult in those areas that have already implemented a variety of innovative CO control measures. In such areas, additional reductions will come as a result of more sophisticated control measures, such as the development of mass transit. While these measures will ultimately result in attainment by the final deadline, the planning and implementation process will be significantly longer than for implementation of, say, an oxygenated fuels program. Therefore, STAPPA and ALAPCO recommend that, where appropriate, milestones be based upon progress in developing and implementing the innovative controls necessary for attaining the standard by the deadline.

## $PM_{10}$ NONATTAINMENT

### Designation and Deadlines

STAPPA and ALAPCO also agree with the general approach taken by S. 1630 to address $PM_{10}$ nonattainment by classifying areas into two categories and providing up to five or ten years (depending upon classification) to attain the standard. The associations believe that many $PM_{10}$ nonattainment areas should be able to attain the standard by December 31, 1993, particularly if they are required to implement RACT on all major sources. In other instances, however, areas may need ten years to attain, especially where secondary particulate formation is a significant cause of nonattainment.

### Attainment Demonstration and Milestones

STAPPA and ALAPCO agree with the provisions in S. 1630 requiring states to submit plans that demonstrate attainment and include quantitative milestones. However, we urge that all nonattainment areas--not just those areas receiving an extension--be required, at a minimum, to implement all Reasonably Available Control Measures as expeditiously as practicable.

### Guidelines for $PM_{10}$ Nonattainment Areas

STAPPA and ALAPCO support provisions of S. 1630 that require EPA, within 18 months of enactment, to promulgate CTGs with respect to Reasonably Available Control Technology (RACT), Reasonably Available Control Measures (RACM), Best Available Control Technology (BACT) and Best Available Control Measures (BACM) for stationary and area sources of $PM_{10}$. We are pleased that this guidance must, at a minimum, identify technology and measures for combustion sources such as wood burning, prescribed burning for silviculture and agriculture and urban fugitive dust. The associations urge that woodstove curtailment be identified as a Reasonably Available Control Measure and that such a decision be made as soon as possible, rather than at the end of the 18-month period allotted for other control decisions. Woodstove curtailment will allow many areas to significanlly reduce $PM_{10}$ levels and attain the standard in an expeditious manner. Further, we suggest that the bill require that New Source Performance Standards for woodstoves be upgraded to include durability testing.

The associations are also pleased that the bill requires $PM_{10}$ increments in areas where Prevention of Significant Deterioration requirements are in effect.

Finally, while we are pleased with the $PM_{10}$ program established in S. 1630, we recommend the following additions: (1) requirements for all new buses to meet a 0.10 g/Bhp-hr particulate standard by the 1991 model year, (2) provisions to regulate existing diesel buses, which represent a significant source of $PM_{10}$ pollution in many urban areas, (3) a more stringent performance standard--achieveable through the use of alternative fuels--for all new buses, beginning with model year 1994 and (4) waivers for areas where anthropogenic sources of $PM_{10}$ do not contribute significantly to violations of the $PM_{10}$ standard.

## MOTOR VEHICLE CONTROLS

Mobile sources are the most dominant source of ozone precursors and carbon monoxide, responsible for 50 percent of our nation's ozone problem and 90 percent of our CO problem. In addition, mobile sources emit significant quantities of nitrogen oxides (contributing to acid rain, visibility impairment and ozone), fine particulate matter and toxics. Further, motor vehicle emissions are expected to increase in the late 1990s. Without strong measures to address these sources, all of our other efforts to ameliorate ozone and carbon monoxide nonattainment may well be frustrated. Consequently, it is imperative that stringent mobile source controls be enacted.

STAPPA and ALAPCO strongly support the mobile source provisions included in S. 1630, and believe these measures will play a large role in significantly reducing air pollution problems throughout the country.

### Tailpipe Standards

The associations support the bill's first phase of tailpipe standards for light-duty vehicles--0.25 grams per mile (gpm) for hydrocarbons, 0.4 gpm for oxides of nitrogen and 3.4 gpm for carbon monoxide--and find the schedule for implementation to be appropriate. We note that these standards are already being required in California and will be proposed in eight northeastern states. We agree that it is critical for these standards to take effect in-use as quickly as possible and apply for the full life/useful life of the vehicle (10 years/100,000 miles) in order to maximize the effectiveness of the regulations.

We also endorse the second phase of the tailpipe standards and note that, while they are technology-forcing, they do not take effect until 2003, which should give manufacturers sufficient time to develop the necessary technology. STAPPA and ALAPCO commend the Subcommittee for including this second, more stringent phase of standards in that it is critical to continue to achieve significant reductions in emissions from motor vehicles into the next century.

## Other Provisions

STAPPA and ALAPCO further support the tighter truck standards in S. 1630, as well as the bill's provisions for cold temperature certification procedures; onboard vapor recovery; onboard emission diagnostic systems; warranties; a prohibition on engines using leaded gasoline; controlling running losses; non-road engines; and revising the Federal Test Procedure to include an idle test and idle test mode, a more stringent standard for production line testing, upgraded in-use compliance and enforcement and a prohibition on averaging.

## Fuel Requirements

With respect to fuels, S. 1630 contains many important provisions, such as those regulating gasoline volatility; limiting the sulfur content of diesel fuel; prohibiting the sale of leaded gasoline; requiring the development of fuel quality specifications; and establishing an oxygenated fuels program. While STAPPA and ALAPCO support all of these requirements, we believe that allowing ethanol blends to meet a fuel volatility limit that is 1 pound per square inch higher than the regular 9 psi standard is unnecessary, unless an area has attained the ozone standard; we recommend that this provision be deleted. Further, as we noted in our comments on the control program for carbon monoxide nonattainment areas, the associations recommend that the oxygenated fuels program require a minimum oxygen content that is lower than the 3.1-percent limit in the bill.

STAPPA and ALAPCO are encouraged that S. 1630 includes provisions for low-polluting vehicles; such a program could have a significant impact on air quality in the long-term. Notwithstanding the fact that there are still many unanswered questions (with respect to such things as availability, pricing, air pollution trade-offs, etc.), the associations stress the importance of continuing to expand our current capabilities in the area of alternative fuels. We believe that the Administration's clean air proposal takes steps to accomplish this by establishing a viable and comprehensive strategy; we commend this effort. Accordingly, the associations recommend that S. 1630 incorporate the alternative fuels provisions included in the Administration's proposal and, further, build upon those provisions by including Serious nonattainment areas, allowing any mix of clean fuels and other vehicle propulsion systems and requiring that two million low-polluting vehicles be sold annually in applicable areas by 1998.

## ENFORCEMENT

STAPPA and ALAPCO generally support the enforcement provisions contained in Title III of S. 1630. The associations expect that measures such as expansion of the list of offenses subject to criminal penalties and increases in the intitial penalties for criminal violations will strengthen and streamline the existing program. Additionally, we concur with the authority afforded EPA to issue administrative civil penalty orders and administrative compliance orders, which may assist the agency in resolving violations administratively and expeditiously. Further, we agree that sources should be liable for penalties for past SIP violations, even if the infraction occurred before a Notice of Violation was issued.

The associations have two areas of concern, however. Specifically, we oppose the use of EPA contractors for inspections and have reservations with respect to the provision that would allow EPA, without prior notice to the state or local agency, to issue field citations calling for penalties of up to $5,000 for minor violations.

## GENERAL NONATTAINMENT PROVISIONS

### Transportation Control Measures

STAPPA and ALAPCO are very pleased with the transportation control requirements of S. 1630. We support the provisions requiring all Severe and Extreme ozone nonattainment areas and Serious carbon monxide nonattainment areas to implement a comprehensive set of transportation control measures or obtain comparable reductions from other measures. In addition, we endorse the requirement for Serious, Severe and Extreme ozone nonattainment areas to implement transportation control measures if actual emissions from vehicle miles traveled, congestion, etc. exceed the levels projected in their plans.

## Regulation of Outer Continental Shelf Activities

The associations are gratified that S. 1630 addresses the regulation of Outer Continental Shelf (OCS) activities. In many coastal nonattainment areas, offshore oil platforms, storage and treatment facilities and related support facilities and activities are sources contributing to and exacerbating nonattainment problems. Currently, the air pollution control requirements for most OCS activities are less stringent than those which apply to onshore emissions. STAPPA and ALAPCO strongly support the provisions of S. 1630 which require that OCS sources be regulated as if they were located in the corresponding onshore area.

## Conformity of Air Quality and Transportation Goals

The issue of conformity of air quality and transportation goals is a very important one to STAPPA and ALAPCO. Currently, a disagreement between EPA and the Department of Transportation concerning the definition of "conformity" has resulted in the funding of transportation projects that adversely impact air quality goals. We are extremely pleased that S. 1630 addresses this issue by obligating transportation projects to aid in attaining and maintaining air quality standards. While many transportation projects may lead to air quality improvements, some will yield far greater reductions than others; it is imperative that such projects be given the highest priority by DOT. Significant reductions in vehicle miles traveled are sorely needed in many ozone and CO nonattainment areas. Unless transportation projects are evaluated based upon their ability to assist in attaining and maintaining the standards, adequate reductions will be difficult, if not impossible, to achieve.

## Requirements for Permits and Fees

STAPPA and ALAPCO support the concept of an operating permit program for all major sources. We are gratified that S. 1630 incorporates this concept and strongly believe that such a system will greatly enhance the effectiveness of air pollution control programs. In addition, the assessment of permit application fees, as well as per-ton emission fees for major sources in nonattainment areas will not only offset the administrative costs associated with the permit process, but also provide much-needed additional resources to fund other efforts related to the implementation of an effective control program, such as ambient monitoring and enforcement.

The associations further believe that it is especially appropriate for all sources of air pollution to participate in the funding of control efforts. Accordingly, we also endorse the bill's provision requiring that a fee of $2.00 per vehicle be assessed on all automobiles registered in any nonattainment area; we are pleased that the proceeds resulting from this requirement will go to the appropriate state or local air pollution control agency for program development and implementation.

## Thresholds

Given the significant contribution of smaller area sources to ozone, carbon monoxide and $PM_{10}$ nonattaiment, STAPPA and ALAPCO support the bill's decreasing cut-offs for new and existing sources in each successive nonattainment category. The application of controls and increasingly stringent offsets based upon such thresholds should effectively reduce emissions.

## Sanctions and Audits

STAPPA and ALAPCO appreciate the provisions of S. 1630 that, generally, do not sanction areas that try in good faith, but, nonetheless, fail to attain federal air quality standards. Instead, under the approach taken by this legislation, such areas are reclassified into the next nonattainment category and, accordingly, required to implement more stringent control measures. The bill does, however, appropriately include provisions allowing for the imposition of sanctions such as a construction ban, withheld highway funds and air grants, increased emissions fees and a redefined (lower) threshold for major sources. In addition, we suggest that a ban on drinking water hook-ups be included.

The associations suggest two refinements to the sanctions provisions of the bill. First, while we agree with the intent of imposing a $5,000 per ton fee on major stationary sources in areas that do not meet the ozone standard by the applicable deadline, we note that inequities may occur in the event that nonattainment problems are the result of long-range transport, area sources or mobile sources. Second, we believe that air program audits represent prudent public policy and suggest they be required annually in all nonattainment areas, rather than being reserved as a sanction.

In conclusion, the members of STAPPA and ALAPCO firmly believe that S. 1630 represents an aggressive, yet realistic, solution to one of the most intractable environmental problems ever faced by this nation. We commend you, Chairman Baucus, and cosponsors of this legislation, for a job well-done. I thank you for this opportunity to testify and, on behalf of STAPPA and ALAPCO, offer to you our cooperation as you continue to address the issue of nonattainment.

NORTHEAST STATES FOR COORDINATED AIR USE MANAGEMENT
(NESCAUM)

(NESCAUM)

MEMBERS:

MEMBERS:

CONNECTICUT AIR COMPLIANCE UNIT
MAINE BUREAU OF AIR QUALITY CONTROL
MASSACHUSETTS DIVISION OF AIR QUALITY CONTROL
NEW HAMPSHIRE AIR RESOURCES DIVISION

NEW JERSEY DIVISION OF ENVIRONMENTAL QUALITY
NEW YORK DIVISION OF AIR RESOURCES
RHODE ISLAND DIVISION OF AIR RESOURCES
VERMONT AIR POLLUTION CONTROL PROGRAM

Testimony of

Anthony J. McMahon, Acting Director
Division of Environmental Quality
New Jersey Department of Environmental Protection

on behalf of
Northeast States for Coordinated Air Use Management
before the

Senate Environment Committee

September 27, 1989

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Mr. Chairman and members of the Committee, my name is Anthony J. McMahon. I am the Acting Director of the Division of Environmental Quality of the New Jersey Department of Environmental Protection. I am here to testify on behalf of the Northeast States for Coordinated Air Use Management (NESCAUM) regarding the Senate's and the Administration's Clean Air Act legislative proposals. The members of NESCAUM include the air pollution control agencies in eight Northeast states: Connecticut, Maine, Massachusetts, New Jersey, New Hampshire, New York, Rhode Island, and Vermont. NESCAUM's purpose is to promote cooperation and coordination of technical and policy questions among its member states. I would like to commend the President and the Senate Environment Committee for developing constructive proposals which embody many of the principles that the NESCAUM states believe are essential to improving air quality in the Northeast.

I want to endorse the testimony of Len Bruckman of Connecticut and Dori Theiler for STAPPA. All of the NESCAUM Directors are active members of STAPPA and have participated in developing their position on reauthorization of the Clean Air Act.

NESCAUM has testified previously before this Committee on Clean Air Act issues; we are delighted to be asked to testify again. I wish to stress that NESCAUM's comments represent the collective technical judgement of the Northeast states' air quality control programs.

The top priority of state air quality management officials is to protect the public from exposure to unhealthy levels of air pollutants; our greatest concerns in the Northeast are ozone, acid deposition, carbon monoxide, and other air toxics.

Achieving healthy air quality is a complex problem, but this complexity should not be a deterrent to moving forward to reduce emissions. There are many emission reduction measures available for implementation now which will move us toward attaining and then maintaining the health standards. In addition, many new and innovative control measures will be required in order to attain national standards. Some of these necessary measures are technology-forcing. Others may require modifications of fuel supplies and transportation policies that have been in place for many years.

The Northeast experiences frequent and widespread violations of the health-based national air quality standards for ozone. Ozone is formed when hydrocarbons and nitrogen oxides react in the presence of sunlight. Peak ozone concentrations occur on successive hot summer days when ozone forms most rapidly and accumulates over broad regions. Exposure to unhealthy levels of ozone is one of the most serious and widespread public health problems in the Northeast. Each year, more than 35 million people in the Northeast are exposed to unhealthy levels of ozone. Repeated or long-term exposure to ozone may cause increased susceptibility to respiratory disease, loss of pulmonary elasticity, and premature aging of the lungs. In addition, widespread terrestrial damage has been documented from ozone exposure at ambient concentrations well below the current health standard.

Ozone episodes in 1988 were exacerbated by an unusually warm, dry summer. Typical summer weather in the Northeast usually leads to about 40 unhealthful summer days each ozone season (violations about every third day). Preliminary ozone data for 1989 show fewer ozone violation days, primarily due to the smaller number of very hot days in 1989 and, to a lesser degree, to strict gasoline volatility rules adopted by seven Northeast states in the last year.

Notwithstanding the positive steps taken in the past to reduce emissions, the National Acid Precipitation Assessment Program (NAPAP) has projected that without further actions, volatile organic compounds (VOC) and nitrogen oxides (NOx) emissions will increase in the 1990s. If emissions increase in the future or if recent predictions of global warming and increased ultraviolet radiation over the next several decades prove correct, ozone violations, which are exacerbated by all of these factors, are likely to become far more widespread and more harmful to human health and the environment.

Throughout the Northeast, acid deposition constitutes a significant threat to human health, is the cause of considerable damage to aquatic and terrestrial ecosystems, and significantly contributes to visibility impairment and to the deterioration of historic monuments and other buildings and materials. The principal precursors to atmospheric acidity are sulfur and nitrogen oxides ($SO_2$ and $NO_x$). Acidic air pollutants and their precursors can be transported by weather systems hundreds of miles. Similarly, ozone, the principal oxidant in summer smog, and its precursors, volatile organic compounds and nitrogen oxides, can also be transported hundreds of miles downwind, exacerbating public health problems. As this Committee is well aware, national acid deposition legislation is long overdue. NESCAUM is very pleased with the acid deposition legislation announced last week by Senators Mitchell and Baucus.

Federal air quality standards for carbon monoxide (CO) are exceeded by a significant margin at different times and locations in the Northeast. In the Northeast, approximately 70% of CO is emitted by mobile sources. The highest CO concentrations tend to occur during cold winter mornings or nights that have light winds and air stagnation. Carbon monoxide can reduce carboxyhemoglobin in the blood, thus reducing the blood's ability to carry oxygen. Exposure to unhealthy levels of carbon monoxide can cause chest pains and may initiate angina attacks in sensitive individuals.

In light of these serious air quality problems, the NESCAUM states are moving forward on a number of control measures. These include implementing a regional gasoline volatility strategy this year that limits Reid Vapor Pressure to 9.0 psi during the ozone season, evaluating and proposing the adoption of the more stringent California Motor Vehicle Control Program, passing stringent sulfur-in-fuel regulations or acid deposition legislation, developing innovative air toxics programs, implementing Stage II vapor recovery at gasoline stations in up to four Northeast states, and evaluating various stationary source control measures to reduce NOx and regional strategies for consumer solvents and architectural coatings. Due to the lack of federal and congressional action, states are duplicating their efforts in evaluating these measures. NESCAUM believes that a more effective and appropriate approach to resolving the regional ozone problem would be through comprehensive revisions to the Clean Air Act. NESCAUM is encouraged to see that serious proposals to amend the Act are being debated in the Senate and House of Representatives, with the active participation of the Executive Branch.

### *Attaining the Ambient Air Quality Standards*

Based on preliminary U.S. Environmental Protection Agency (EPA) regional ozone modeling analyses, attainment of the federal clean air standard for ozone will require emission reductions within the Northeast states of about 60% for hydrocarbons and 40 to 50% for nitrogen oxides. This is in addition to the 30 to 40% reduction in hydrocarbons already achieved. EPA's analyses are consistent with a growing consensus among the Northeast states that NOx as well as hydrocarbon emissions play a critical role in the formation of ozone and that emissions of both NOx and hydrocarbons must be reduced to attain healthy air quality. NESCAUM is aware that some modeling studies suggest that nitric oxides, the major fraction of most NOx emissions, can act to scavenge ozone and thus reduce concentrations near the source. However, other modeling studies and ambient measurements show that, farther downwind, the same NOx can actually enhance ozone formation. A more balanced approach of controlling both VOC and NOx region-wide tends to ensure that ozone improvement near the source are accompanied by ozone improvement in downwind areas.

In order to improve air quality, NESCAUM believes that the Clean Air Act should be revised to include the following principles.

1. The Clean Air Act should establish clear federal and state responsibilities.
2. The Act should include a mandate to aggressively institute available control measures at the earliest practical date, while simultaneously improving the scientific basis for implementing additional control measures in the future.
3. All areas, both non-attainment and attainment, that contribute to ozone exceedances through regional transport should contribute to the solution of the problem by implementing, at a minimum, all reasonably available control measures for HC and NOx for mobile and stationary sources.
4. The burden for reducing precursor emissions should be spread among all sources - mobile, stationary, and area - based on each sector's relative contribution to the problem and the cost-effectiveness of control measures.
5. Attainment deadline extensions should reflect the severity of the problem and should include effective sanctions to ensure that state and federal agencies follow through on their commitments.
6. Acid deposition legislation must cap emissions of $SO_2$ and NOx and include, at a minimum, reductions of 10 Mton of $SO_2$ and 6 Mton of NOx from stationary and mobile sources based on 1980 levels.
7. Toxics legislation should require control technology based standards with a goal of reducing risk to one in a million for all significant air toxics.
8. The Clean Air Act should require the use of transportation control measures to reduce vehicle miles traveled and vehicle trips. Vehicle efficiency must also be improved.
9. Performance standards for automobiles should be adopted that will allow auto and oil companies to find the best fuels and technologies to reduce mobile source emissions.
10. Motor vehicle emissions should be stringently controlled throughout the vehicles lifetimes.
11. Economic incentives should be established to encourage timely reductions from all emission sources.
12. Agencies should be allowed to collect fees from mobile and stationary sources, which will discourage excessive pollution and help support state programs.

Senate bill 1630 recognizes that substantial emission reductions must be achieved in order to attain the carbon monoxide and ozone health standards and incorporates these principles. NESCAUM strongly supports these provisions.

NESCAUM is convinced that substantial improvements in air quality will result if the principles above are effectively incorporated into the new Clean Air Act. However, if these principles are significantly compromised, NESCAUM's believes that it will be virtually impossible to ensure healthy air quality levels for ozone and carbon monoxide in the Northeast in the next 15 or 20 years. In addition to these general principles, NESCAUM would like to offer more detailed comments on the motor vehicle control requirements, regional transport provisions, and acid deposition provisions included in S 1630 or the Administration's proposal.

NESCAUM supports a number of elements in the Administration's clean air proposal. The Administration's proposal includes the goal of reducing $SO_2$ by 10 MMtons. This will reduce acid deposition that has been damaging the environment, accelerating materials damage, and threatening public health in the Northeast for over 20 years. The cap in emissions included in the Administration's proposal is critical if we are to see permanent benefits from reducing the emissions that contribute to acid deposition. The NESCAUM Directors support a technology-based program to control emissions of air toxics (other than the AAQS) as an effective way to reduce exposure to the most prevalent and health threatening air toxics; however the NESCAUM Directors believe that a goal of one in a million risk factor is appropriate. NESCAUM also supports the use of permit fees from stationary sources to help fund state air pollution control efforts and the use of sanctions only for failure to plan to attain clean air goals or for failure to fulfill obligations under those plans.

## *Motor Vehicle Control Requirements*

Motor vehicles are the largest source of emissions of CO and of hydrocarbons (HC) and NOx, which contribute to the formation of ozone. The percentage of total emissions due to mobiles sources, both nationally and in the Northeast, is as follows.

| | NATIONAL | NORTHEAST |
|---|---|---|
| HC | 35% | 60% ( higher on hot summer days) |
| NOx | 45% | 55% |
| CO | 70% | 70% |

To underscore the importance of effective motor vehicle emission controls in the Northeast and their commitment to an effective control program, on August 10, 1989 the eight Environmental Commissioners in the NESCAUM states signed a Memorandum of Understanding stating their intention to "propose regulations to adopt motor vehicle emission standards equivalent to California's." A copy of this MOU is attached to my testimony today.

Federal emission standards for automobiles have reduced emissions per vehicle in recent years. However, without more effective emission reduction measures, vehicle emissions are projected to begin to increase in the mid-1990s due to increased numbers and usage of vehicles. Unless effective control requirements are established by Congress and implemented by EPA, the expected doubling of vehicle miles travelled in the Northeast over the next 25 years will likely overwhelm and completely negate the air quality benefits of having lower-emitting individual vehicles. In addition, EPA test data show that even properly maintained cars (which do not include the effects of tampering, misfueling, poor maintenance, or lack of maintenance) usually exceed the 50,000 mile standards for HC and NOx by the time they reach 30,000 miles, and over their lifetimes emit pollutants well in excess of tailpipe standards. Vehicles that have been tampered with or poorly maintained have even higher emissions. Without Congressional action to require substantially less polluting vehicles, NESCAUM anticipates that the Northeast will continue to have unhealthy levels of ozone and carbon monoxide for the foreseeable future. By not achieving maximum controls on vehicles, states will be forced to shift undue emission reduction burdens onto stationary and area sources. Therefore, NESCAUM believes that a new Clean Air Act must include a combination of aggressive motor vehicle emission control provisions.

The motor vehicle control provisions in a new Clean Air Act should include:

1. more stringent tailpipe standards for HC and NOx for light duty cars and trucks for model year 1993
2. more effective and representative procedures for exhaust standard certification
3. enforcement measures to significantly improve in-use compliance with vehicle standards
4. technology-forcing standards for HC, NOx, and CO for model year 2000 and beyond
5. improvements in the Federal Test Procedure, including a carbon monoxide cold start certification at 20°F
6. a requirement for advanced on-board diagnostics similar to requirements recently adopted by the state of California for model year 1994 and beyond to help ensure continued lower emissions from in-use vehicles
7. strong measures to reduce evaporative emissions, including "running losses"
8. strategies to stem the growth of vehicle use
9. incentives to evaluate and demonstrate appropriate use of alternative fuels, targeted to assist in addressing specific air quality problems without exacerbating other air quality problems

NESCAUM strongly supports the provisions of S 1630 which incorporate these principles. These provisions, in combination with reduced gasoline volatility, Stage II vapor recovery, and vehicle evaporative control provisions also contained in S 1630 will, together with state I/M programs and other state initiatives, provide the type of comprehensive strategy the Northeast will need in order to achieve the ozone and carbon monoxide standards.

*Implementing the California Motor Vehicle Control Program in the Northeast*

In 1987, in response to persistent violations of federal air quality standards for ozone and CO despite increasingly more stringent controls imposed on stationary sources, NESCAUM began to study the effectiveness of the federal motor vehicle control program and to evaluate the feasibility of adopting the more stringent California motor vehicle control program in the Northeast states. Based on the findings of several studies, the Environmental Commissioners of the Northeast states signed an agreement on August 10, 1989, to propose a regional, coordinated approach to controlling motor vehicle emissions.

Each of the Northeast states will propose California emission standards on new vehicles beginning as early as model year 1993. In addition, each state will evaluate and select, through its respective state planning process, elements of California's more stringent enforcement program that will provide the greatest benefits. Implementing state regulations will, in some cases, require legislative concurrence.

The key elements that make the California vehicle standards more effective than the corresponding federal standards are lower NOx limits, lower HC limits, full useful life provisions, and advanced on-board diagnostics.

The Administration has proposed several revisions to the Clean Air Act which would tighten federal automobile emission standards. However, the proposed federal standards (0.25 g/mi HC, 0.7 g/mi NOx, and 3.4 g/mi CO) would not result in lower emissions than the California standards already adopted for 1993 for the following reasons.

- The Administration's proposal includes a provision for "averaging" across manufacturers and model years. By some estimates, this could result in an effective relaxation of current emission standards by as much as 40 to 50 percent.

- Federal automobile standards would continue to apply only for 50,000 miles, while California has already adopted requirements for 100,000 certification.

- The proposed NOx standard of 0.7 g/mi, to take effect in model year 2000, is less stringent than the level (0.4 g/mi) currently required of all California cars, and is much less stringent than California's proposed future standard of 0.2 g/mi, which has already been achieved in certification by at least one existing engine family using high quality fuel.

- Current and proposed federal standards for light duty trucks are less stringent than corresponding California standards for light duty trucks.

Because of the seriousness of the threat to public health and the need to identify additional emission reduction measures, NESCAUM supports the inclusion in the Clean Air Act of more restrictive, technology-forcing tailpipe standards in the late 1990s. The staff of the California Air Resources Board has already identified one such standard, 0.2 g/mi NOx, which it has proposed. Technology-forcing automotive provisions in previous Clean Air Act Amendments have resulted in emission control developments, such as the three-way catalyst, that were said to be impossible when Congress passed these laws. The stringent standards contained in S 1630 for model year 2000 will create a strong incentive for developing innovative emission control technologies needed to lead us towards more healthy air quality in the mid-1990s and beyond.

The motor vehicle control provisions contained in S 1630 are more stringent and will be more effective than those contained in the Administration's proposal. The Administration's more lenient tailpipe standards for both light duty cars and trucks, lack of a mandate for extending the useful life provisions, and failure to require necessary improvements in the Federal Test Procedure are among the more significant shortcomings of the Administration's proposal. NESCAUM recognizes that the Administration's proposal reflects one approach to the nonattainment problem. However, its heavy reliance on alternative fuels, in contrast with its failure to require implementation of demonstrated reduction technologies, failure to require enhanced vehicle inspection and maintenance programs, and reliance on vehicle turnover to reduce vehicle emissions is inconsistent with the seriousness of the ozone problem and is inadequate for the Northeast. To fulfill the promise of cleaner air, the new Clean Air Act must ensure significant HC and NOx emission reductions from motor vehicles at the earliest practicable date.

For example, the Administration's light duty truck standards become fully effective in model year 96 at 0.6 gpm for HC and 0.8 gpm for NOx. In comparison, the California program and S 1630 require that light duty trucks meet the identical, lower standards that cars are required to meet. Since light duty trucks, which include the popular mini vans, are the fastest growing vehicle family in the Northeast, the net emission disparity between the Administration's proposal and S 1630 is very substantial. In addition, the Administration's proposal would delay the 1991 bus standards and the 1994 heavy duty diesel standards.

The Administration's bill contains a major new initiative on the use of alternative fuels. The NESCAUM states recognize that the agencies in California have made a concerted effort to examine the role of alternative fuels in their region and have come to the conclusion that a number of these fuels--methanol, CNG, propane, oxygenated and clean gasoline ---can achieve measurable benefits in air quality. Much less work on alternative fuels has been completed for the Northeast. While we support efforts to demonstrate and assess alternative fuels in the Northeast through research and demonstration programs, we remain unconvinced that the benefits would be equivalent to those indicated for southern California. For a variety of reasons, alternative fuels may have a different effect and create a range of potential problems in the Northeast. Reasons for these differences include meteorology, especially lower temperature in the Northeast; fleet age and distribution; driving patterns; and production and distribution of fuel. We support programs that would dedicate these fuels to achieving lower emissions from buses and trucks as well as fleet vehicles. In this regard, NESCAUM is very concerned about the Administration's proposal to delay implementation of 1991 and 1994 emission standards for buses and heavy duty vehicles. Finally, NESCAUM believes that we can not rely on technological controls and alternative fuels alone to solve the motor vehicle problem. Improved public transportation options that encourage reductions in VMT are also needed.

Thus, NESCAUM believes that the Administration's motor vehicle provisions are insufficient. Vehicle emissions are the largest source of both carbon monoxide and ozone precursor emissions. The motor vehicle control provisions in the Administration's proposal will seriously compromise the goal of achieving the air quality health standards. S 1630, by contrast, would provide essentially all of the key features of an effective federal motor vehicle control program. We are very pleased to see that the Senate bill would accomplish these goals.

*Regional Transport*

Regional transport of ozone and ozone precursor emissions is another very important dimension of the Northeast ozone problem that must be effectively addressed in a new Clean Air Act. Ozone modeling studies by the EPA and by several states suggest that ozone attainment in lower New York state, New Jersey, and southern New England will be virtually impossible unless transported pollutants are significantly reduced. According to the 1985 NAPAP inventory, NOx and HC emissions from the six states directly upwind of the NESCAUM states were 100% and 79% greater, respectively, than the total emissions from the eight NESCAUM states. NESCAUM estimates that upwind emissions, like emissions in the NESCAUM region, must be reduced by at least 40 to 50% to ensure future attainment of the ozone health standard.

Both S 1630 and the Administration's proposal have included regional transport provisions, establishing a Northeast transport region and a regional commission consisting of EPA and the states in the region. However, S 1630 goes further than the Administration's bill in mandating the implementation of several reasonably available control measures throughout the ozone transport region and authorizing the regional commission to identify additional measures. NESCAUM believes region-wide implementation of these reasonably available control measures is necessary to achieve healthful ozone levels. Leaving the entire responsibility for recommending baseline regional control requirements to the regional commission and EPA does not ensure that transported pollutants will be substantially reduced. NESCAUM has advocated including in the Clean Air Act prescriptive control technology requirements for all areas that significantly contribute to ozone nonattainment via atmospheric transport. The regional transport provisions in S 1630 could accomplish this.

In August 1988, a Regional Ozone Transport Group was organized by the U.S. Environmental Protection Agency to provide a forum for federal and state environmental officials to discuss the dimensions of regional oxidant transport in the northeastern United States and to explore potential abatement mechanisms. At the July 14, 1989 meeting of the Regional Ozone Transport Group, the state representatives from Massachusetts, Connecticut, New York, New Jersey, and Pennsylvania expressed strong support for the ozone strategy set forth in the document entitled "Program Concepts for Northeast Ozone Attainment". A copy of this is attached.

The Regional Ozone Transport Group (ROTG), along with NESCAUM, endorses an integrated program that will, at the earliest practicable time, significantly reduce emissions regionally by applying all reasonably available control technology. At the same time, this program will require completion of specific ozone assessment activities that will, over the longer term, serve as the basis for allocating specific emission reduction goals to be achieved by various areas within the region and defining emission reductions needed in specific areas upwind of the region.

The ROTG recognizes that it will be necessary to implement a combination of control measures on national, regional, and local levels and that, in light of the apparent magnitude of emission reductions needed and the limited reductions available from identified control options, the risk of over-control is negligible. However, in planning for the future, the program's assessment activities should include developing high quality emission inventories for nitrogen oxides and speciated hydrocarbons, expanding ambient monitoring for ozone and nitrogen dioxide, improving and expanding monitoring for speciated hydrocarbons and nitrogen oxides, and modeling on regional and urban scales.

The ROTG concept paper recommends that states in the region implement all currently available control measures, that the EPA expedite implementation of available federal control measures, and that the states and EPA jointly administer an intensive assessment program designed to provide the basis for a second phase of appropriate control measures that will ensure that the ozone standard is attained and maintained throughout the Northeast. The state Transport Group representatives believe that the formulation of this approach to the Northeast ozone problem is a major accomplishment. We are very pleased to see that the Senate Committee has adopted these recommendations.

*Acid Deposition*

The primary sources of acid deposition and ozone precursors are emissions released from the combustion of fossil fuels in utility and industrial applications and emissions from automobiles and trucks. The combustion of fossil fuels in any form contributes to global warming and the deposition of toxic heavy metals. A number of studies, including those completed by NESCAUM, have shown that energy conservation can reduce both emissions and the costs of complying with emission reduction programs. In addition, as with ozone, any long-range problem involving transported pollution requires a regional control program to effectively reduce emissions. This is particularly true since the production and transmission of electricity involves multi-state power grids.

The NESCAUM Directors have expressed their strong support for national legislation to control acid deposition precursors since April 1981. The New England Governors have expressed their unified support for controls on acid deposition precursors in resolutions since June 1982 and in their joint resolutions with the Eastern Canadian Premiers since June 1982. The states of Massachusetts, New Hampshire, New Jersey, and New York are implementing state legislation to reduce sulfur oxides.

The NESCAUM Directors believe that national legislation must:

- require emission reductions from a 1980 base year of, at a minimum, ten (10) million tons of $SO_2$ and six (6) million tons of $NO_x$, and substantial reductions of volatile organic compounds and transported air toxics. These emission reductions should be achieved as soon as practicable, but no later than the year 2000.

- establish state-wide emission caps leading to a permanent reduction in emissions and allow for alternative compliance mechanisms.
- encourage energy conservation wherever possible as a means of achieving emission reductions and reducing dependence on fossil fuels, while accommodating growth in demand for electricity without increasing emissions.

We believe that the EPA and state air, utility regulatory, and energy agencies should cooperatively develop effective multi-state strategies for reducing emissions of transported pollutants where practicable. However, emission trading should be limited to within these regions.

As estimated by EPA, acid deposition legislation will lead to a 1 to 2% increase in electricity bills. This is not an unreasonable or excessive price to pay for reducing acid deposition.

*Air Toxics*

In general, the Administration's proposal for controlling hazardous air pollutants does not represent the pro-active position required for dealing with one of the most significant public health problems. We are just beginning to investigate the potential health effects associated with the complex mixture of pollutants, both in the air and water, to which we are exposed throughout our lives. The states are looking for leadership with regard to health-based research on exposure to air toxics and development of control technologies.

A reauthorized Clean Air Act should require a specific format to control air toxics including

- a list of toxic air pollutants based on specific criteria including toxicity, data from monitoring and industrial inventories, and a mechanism to add and delete compounds from the list as necessary.
- a requirement equivalent to BACT for new and existing sources. The Administration's proposal for maximum achievable control technology (MACT) will not provide for the same level of control.
- evaluation of residual risks and steps to mitigate these risks (if they exist).
- identification of the major sources of air toxics and specific requirements to reduce such exposures (e.g., minimum ventilation requirements for reducing indoor air pollution in new homes and buildings, and mobile and area source controls to reduce urban toxics).
- providing incentives for industry to initiate pollution minimization programs.

Quantitative criteria need to be established to define "unreasonable risk", "negligible risk", and "adequately controlled" sources. These criteria should establish a standard that provides an ample margin of safety to protect the public health and should not include considerations of cost and technical feasibility in the standard-setting process. Recognizing that standards are based primarily on chemical-specific risk assessments and do not account for the potential interactive effects of components in complex mixtures, individual lifetimes cancer risks should not exceed one-in-a-million.

We are concerned about a number of areas in the Administration's proposal. In addition to carcinogenic risks, many toxic air pollutants pose significant non-cancer risks, particularly to sensitive subpopulations such as the elderly and children. The schedule established in the proposal for promulgation of standards and control of sources allows too much delay in reducing public exposure to these compounds. In addition, waivers should be limited and should only be given if the risk is determined to be acceptable.

Research is needed in providing health effects data on substances for which no data exists. However, in the interim, a lack of health effects data should not be construed as negative toxicology data. Research on exposure to mixtures of pollutants is also needed and is a major concern in the NESCAUM states.

*Particulate Matter*

In the NESCAUM region, several states contain areas that may not meet the NAAQS for PM10. Maine is the only state in the region that currently has a Group I area (high probability of nonattainment for PM10). In addition, several counties in New York and New Jersey have been designated Group II areas (those with a moderate probabilities of nonattainment for PM).

The PM10 problems that exist in the NESCAUM region are caused by a combination of local source emissions and long-range transport of primary and secondary PM10. Because of this, control strategies for PM10 must provide for reductions in transported PM10 as well as reductions in emissions of PM10 from local sources. Current federal emphasis on controlling only local sources of directly-emitted PM10 falls short of the comprehensive control strategies necessary to maintain the PM10 NAAQS or to attain the standards in areas with more severe problems.

NESCAUM is encouraged by the direction and emphasis of the Senate's proposal. Several elements of the proposal provide a strong basis for meeting and maintaining PM10 NAAQS. Specifically, including PM10 precursor emissions in inventory and control plans addresses the need for a more comprehensive approach to controlling PM10. In addition, by defining a major stationary source for PM10 as one that emits or has the potential to emit 50 tons/year of directly emitted PM10 or 50 tons/year of PM10 precursor emissions, states are given an added ability to permit and control PM10 emissions.

*Other Provisions*

We believe that the Administration's bill allows EPA too much discretion and we are pleased to see that the Senate has imposed more stringent deadlines or explicit authority in a number of areas. Some of the most prominent differences between the two proposals include provisions for motor vehicles such as evaporative controls and advanced on-board diagnostics, provisions for issuing consumer solvent regulations, and the use of Federal Implementation Plans. We believe that a reauthorized Clean Air Act must include a hammer provision for EPA similar to that used when states fail to plan or meet commitments required in legislation. This could mean default language with a hammer in terms of required levels of control technology or reductions that must be achieved from a category of sources as a sanction on EPA. We would prefer to work with EPA to solve difficult air pollution problems together. The federal/state partnership has worked in the past and we look forward to its renewal under a new Clean Air Act.

The permit oversight given to EPA in these proposals is unwarranted and unnecessary. The new permitting program established in the Administration's proposal could reduce the number of regulations that need SIP revisions. We are aware that EPA is already considering ways to draft the regulations for this new permit program. We urge EPA to work with states in drafting these regulations. This program must be designed to allow those states with delegated permitting authority to continue to implement their existing permit programs.

*Conclusion*

In conclusion, NESCAUM believes that the provisions of the bill being considered by this Committee include many needed additions or changes in the Clean Air Act for attaining the carbon monoxide and ozone standards in the Northeast. The Senate's proposal would mandate emission reductions of carbon monoxides, nitrogen oxides, and hydrocarbons in all of the NESCAUM states. However, S 1630 clearly goes much further than the Administration's proposal in reducing emissions of carbon monoxide, nitrogen oxides, and hydrocarbons. NESCAUM believes that the reductions mandated in S 1630 are needed in the Northeast corridor to reach attainment and to ensure long-term maintenance of the health standards. In addition, the more effective mobile source control provisions of S 1630 will help to ensure that the air quality benefits of new motor vehicle control measures are not completely overwhelmed by anticipated growth in vehicle use and industrial expansion during the 1990s and that stationary sources are not overburdened with requirements for additional emission controls that could be obtained at much lower cost by controlling motor vehicle emissions.

During recent summers, the Northeast suffered through severe ozone levels over a wide area including the most densely populated cities in the United States and in areas as remote as Acadia National Park in Maine. The Northeast states are acting to reduce this threat to public health by implementing several regional emission reduction strategies. But the states alone cannot solve our air quality problems. Federal action is needed to reduce vehicle emissions and regionally transported pollutants. NESCAUM is committed to working with Congress and the Administration to develop and implement the most effective and reliable strategies to ensure the protection of public health. We hope and trust that through your continued hard work, this will be the year for a new Clean Air Act that will enable the Northeast and rest of the United States to move towards cleaner, healthier air.

I will be happy to provide any additional information you need and answer any questions. Thank you for this opportunity to testify.

sen test-9/89;9/26/89

# Program Concepts for Northeast Regional Ozone Attainment

July 13, 1989

## Objective

To set forth a consensus opinion of the Regional Ozone Transport Group (ROTG) regarding ozone precursor reduction and ozone assessment activities which should be undertaken during the next several years.

## Central Principles of Agreement

The ROTG adopts the following principles.

1. In recognition of the severity and regional nature of the ozone problem in the northeastern United States, the ROTG strongly supports the implementation of a regional, technology-based control program.
2. The ROTG supports the implementation of specific control measures and/or emission reduction goals on national, regional, and local levels based on the most effective means of controlling specific sources and on the severity of the ozone problem in specific CMSAs/MSAs.
3. The ROTG supports a strong cooperative partnership between states and the federal government to implement an effective regional ozone abatement control program.
4. The ROTG supports developing an alternative to the "attainment demonstration" SIP process in order to ensure strong state and federal commitment to control technology requirements and assessment activities. However, the ROTG shall continue to rely on measured air quality improvement as its benchmark for progress.

## Introduction

It has been demonstrated that atmospheric transport of ozone and ozone precursor pollutants throughout the Northeast and emissions from the Northeast both play a major role in increasing ambient levels of ozone in the region. It is widely recognized that attaining the ozone NAAQS will require substantial further reductions of precursor emissions into and throughout the Northeast; i.e., all areas which contribute to the nonattainment problem must achieve reductions. Because of the complex nature of oxidant photochemistry, varied meteorological conditions, and the uncertainties associated with current emission inventories, precisely determining a specific area's contribution to downwind violations of the ambient air quality standards for ozone is not possible at this time.

The ROTG endorses an integrated program which will, at the earliest practicable time, significantly reduce emissions regionally by applying all reasonably available control technology. At the same time, this program will require completion of specific ozone assessment activities which will, over the longer term, serve as the basis for allocating specific emission reduction goals to be achieved by various areas within the region and in defining emission reductions needed in specific areas upwind of the region.

The ROTG recognizes that it will be necessary to implement a combination of control measures on national, regional, and local levels and that, in light of the apparent magnitude of emission reductions needed and the limited reductions available from identified control options, the risk of over-control is negligible. However, in planning for the future the program's assessment activities should include developing high quality emission inventories for nitrogen oxides and speciated HCs, expanding ambient monitoring for ozone and nitrogen dioxide, improving and expanding monitoring for speciated HCs and nitrogen oxides, and modeling on regional and urban scales.

The major advantages of this Northeast Regional Transport Control Program are that the immediate application of controls will reduce ozone levels regionally while the states and EPA develop the stronger technical basis needed for determining the additional emission percent reduction required for specific areas.

## Emission Reduction Component

The Emission Reduction Component will be implemented in two phases and will include control measures applied nationally, regionally, and/or locally. The initial phase requires that a specific set of control requirements be adopted by the U.S. EPA and by states. The second phase includes a combination of control requirements designed to achieve a specific percent reduction in total emissions beyond those achieved in the initial phase. The percent reduction targets would be met over five to ten years, depending on the magnitude of the reduction required. Areas that required larger percent reductions would be allowed longer lead times, but would be required to plan and show incremental progress, on a percentage reduction basis, at least as great as in areas with lower percent reduction requirements. The percent reductions would be applied to CMSAs/MSAs with relatively high population densities, but it may be appropriate to expand some measures, such as alternative fuels and growth management measures, beyond a CMSA/MSA. The specific percent reduction allocations for the various CMSAs/MSAs would be determined in the assessment component of the program undertaken in conjunction with the initial emission reduction phase. The percent reduction targets would account for locally generated ozone, an area's contribution to ozone nonattainment problems downwind, and reasonable emission reductions agreed to by EPA representatives as practical and enforceable, for areas upwind of the region.

The specific measures to be implemented in the Control Technology Phase, and whether these measures produce reductions in the short-term (2-5 years) or longer term (more than 5 years) are listed below. Potential control measures which could be used in the Percent Reduction Phase are also listed.

## PHASE I - CONTROL TECHNOLOGY

### Federal Control Measures

Short-term Emission Reductions

- Gasoline Volatility - RVP 9.0 psi
- Architectural Coating Regulations

Long-term Emission Reductions

- Onboard Motor Vehicle Controls
- Increased FMVCP Effectiveness
- Tighter Tailpipe Standards
- Consumer/ Commercial Product Regulations
- Updated/ Tightened NSPSs

### State Presumptive Regional Requirements

Short-term Emission Reductions

- RACT Categories I, II, and III - 50 TPY
- RACT for All 100 TPY Non-CTG Sources
- Gasoline Marketing Controls
- Enhanced I/M in CMSAs/MSAs With Population of 150,000 or Greater
- Tighten NSR Requirements

Short and Long-term Emission Reductions

- Stationary Source RACT for Additional Categories Based on new CTGs and ACTs (see Appendix A)

Other

- Any other control measures, including combinations of HC and $NO_x$ control measures, if demonstrated to be as effective as the above approaches in reducing human exposures to excessive ambient ozone concentrations.

PHASE II - PERCENT REDUCTION

State/ Local Extraordinary Control Options
  Alternative Fuels
  Transportation Control Measures or Other Incentives To Reduce VMT
  Lowering Threshold for RACT
  $NO_x$ RACT
  Measures to Manage Growth
  Increased Offset Requirements
  $NO_x$ I/M

The U.S. EPA should evaluate all of the future stationary source RACT Categories listed in Appendix A to determine the control cost effectiveness (dollars per ton removed) and potential air quality benefits (total emission reductions) for each measure. These control measures should be ranked according to their estimated effectiveness and scheduled for implementation accordingly. Also, a certain level of federal support will be needed for the extraordinary control options listed above.

Ozone Assessment Component

Concurrent to the Control Technology Phase of the Program's Emission Reduction Component discussed above, the states and U.S. EPA will undertake a combination of assessment activities designed to strengthen the technical basis which will be used to establish future emission reduction targets for specific CMSAs/MSAs. These assessment activities include compiling higher quality emission inventories, improving and increasing ambient monitoring, performing photochemical modeling, and establishing percent reduction targets. In addition to these activities, states and the U.S. EPA will develop implementation plans for the extraordinary control strategies (growth offsets, alternative fuels) which many CMSAs/MSAs within the region will have to implement. All of these assessment activities will require continued state/federal cooperation. A summary of the assessment activities is set forth below.

### 1. Emission Inventories

The states, with EPA assistance, must finish compiling higher quality, speciated HC and $NO_x$ emission inventories for stationary sources, area sources, and mobile sources, and including biogenic sources. A reasonable threshold limit for stationary point sources, such as 10 tons per year, will be established. (A lower threshold could seriously compromise the quality of the stationary source emission estimates.) High quality, speciated emission inventories are needed to select effective control measures, to measure progress toward achieving emission reduction targets, and to serve as an efficient basis for triggering RACT and assessing emission fees. The focus should be on determining inventories for hotter summer days that typify conditions when ozone exceedances occur.

### 2. Ambient Monitoring

States should seriously consider increasing the number of monitoring sites for $O_3$, HC, and $NO_x$. A serious effort should be undertaken to ensure that accurate HC and NOx measurements are collected. Speciated VOC measurements should be made, as a minimum, on days which are candidates for air quality modeling and analysis. In addition, supplemental upper air measurements and other aerometric data, as necessary, should be collected for candidate air quality modeling days. Increased monitoring data will provide an improved characterization of $O_3$, HC, and $NO_x$ levels and will provide valuable information on air quality trends. Speciated HC ambient monitoring and other aerometric data will be needed to increase confidence in photochemical modeling results.

### 3. Emission Projections

It is essential to develop reliable emission projections which adequately account for growth. In the past, emission projections have tended to be overly optimistic. Emission projections should reflect the gradual increasing effectiveness of most federal control measures and should use reasonable annual growth rates for vehicle miles traveled and population. The projections should also reflect the actual control effectiveness of state measures as determined in the program audits conducted by the U.S. EPA.

### 4. Photochemical Modeling and Percent Reduction Targets

The U.S. EPA should continue to evaluate potential improvements to currently available photochemical models. Speciated inventories used in photochemical modeling need to be more accurate. Regional scale and urban scale photochemical modeling should be improved in order to assess the effectiveness of various control scenarios on the regional level as well for limited areas within the region.

In light of the interstate nature of the northeast ozone problem, the U.S. EPA should take the lead role, working with the states in the region to establish specific percent reduction targets for each of the CMSAs/MSAs with the region and in working with state and local air quality management officials in upwind regions to determine reasonably available emission reductions and ozone benefits. Photochemical models, with the improved input data, should be used to generate the specific reduction targets for each area.

### 5. Control Strategy Assessment

In recognition of the strong likelihood that areas with high population densities will likely be required to achieve additional emission reductions beyond those implemented in the Control Technology Phase of the Program's Emission Reduction Component, the states and EPA should complete the development of implementation plans for additional extraordinary control measures. These extraordinary control measures should include alternative vehicle fuels for fleet operations and possibly general use, a variety of quantifiable transportation control measures, use of "clean vehicles," and various stringent stationary and area source control measures. The control program design activities should place states in a position to initiate implementing these measures expeditiously once emission reduction targets are established.

In addition to analyzing these area-specific control measures, EPA should continue to assess potential nationally applicable control strategies which may be less expensive and more effective than alternative fuels or local transportation control measures.

### SIP Commitments

An alternative SIP is suggested which would contain state commitments to implement specific control requirements and undertake a variety of assessment activities in cooperation with the U.S. EPA. The alternative SIP would not include an attainment demonstration, but rather a commitment to institute increasingly stringent and far-reaching control measures to achieve and maintain compliance with the ozone standard. It is essential that the SIPs retain direct federal enforceability provisions.

The states would formulate annual progress evaluations and then a federal audit would be performed. Every two to three years, the commitments contained in each the SIP should be reviewed, updated, and revised as appropriate. Initially, states' progress would be measured by their success in adopting and implementing enforceable control measures stipulated in the Control Technology Phase of the Program's Emission Reduction Component. The measure of progress for the Percent Reduction Phase would be determined by the states progress in meeting interim or final emission reduction goals. The specific SIP commitments should include the following.

1. adopt and implement the control technology requirements included in the initial phase of the Program's Emission Reduction Component;
2. conduct and complete the various assessment activities in cooperation with the U.S. EPA;
3. submit annual progress reports including inventory, air quality, and enforcement information;
4. update and revise, as appropriate, SIP commitments every two to three years; and
5. adopt and implement various control measures in areas subject to percent reduction targets. The area of grographic coverage should include, as a minimum, the entire ROM domain.

Program Resources Needed

Substantial new program resources will be needed on the federal, state, and local levels to administer this program. The Northeast states are committed to working with the U.S. EPA to better define the level of resources needed to implement effective ozone control strategies in the Northeast.

3. The geographic coverage of the Northeast region needs to be defined. Two options to consider are EPA Regions I, II, and III or the entire ROM domain.

ROTG-prog concpts;7/13/89

## Appendix A

### Stationary Source RACT Categories

RACT Group I - 15 sources
RACT Group II - 10 sources
RACT Group III - 5 sources
Adhesives - industrial use
Aerospace Exterior Coatings
Auto Body Refinishing
Bakeries
Clean-up Solvents
Electronics Manufacturing
Fabric Printing
Industrial Coatings - high performance maintenance coatings
Industrial Wastewater
Ink Manufacturing
Landfills
Marine Coatings
Marine Vessel/Barge Loading
Metal Rolling
Paint Manufacturing
Pesticide Applications
Petroleum Wastewater Collection and Treatment
Plastic Parts Coatings
Publicly Owned Wastewater Treatment Plants
SOCMI Batch Processes
SOCMI Distillation
SOCMI Reactor Processes
Stage II Vapor Recovery
Traffic Line Painting
Web Offset Lithography
Wineries
Wood Furniture Coating

ROTG-prog concpts;2/21/89

NORTHEAST STATES FOR COORDINATED AIR USE MANAGEMENT
(NESCAUM)

MEMBERS:

CONNECTICUT AIR COMPLIANCE UNIT
MAINE BUREAU OF AIR QUALITY CONTROL
MASSACHUSETTS DIVISION OF AIR QUALITY CONTROL
NEW HAMPSHIRE AIR RESOURCES DIVISION

NEW JERSEY DIVISION OF ENVIRONMENTAL QUALITY
NEW YORK DIVISION OF AIR RESOURCES
RHODE ISLAND DIVISION OF AIR RESOURCES
VERMONT AIR POLLUTION CONTROL PROGRAM

## MEMORANDUM OF UNDERSTANDING
## AMONG THE
## ENVIRONMENTAL COMMISSIONERS OF THE NORTHEAST STATES
## ON
## THE CALIFORNIA MOTOR VEHICLE CONTROL PROGRAM

The Commissioners have determined that motor vehicle emission standards equivalent to California's 1993 standards are an essential part of the national ozone attainment strategy, especially for the Northeast states. Proposals to adopt state regulations in the Northeast will be made in accordance with each state's policies and planning procedures. This action is being initiated because:

1. The Northeast is faced with a severe ozone nonattainment problem and an intractable carbon monoxide nonattainment problem. Motor vehicles are the largest source of hydrocarbons and nitrogen oxides which combine to form ozone and emit approximately 70% of the total carbon monoxide emissions.

2. The Northeast states have completed an evaluation of the California Motor Vehicle Control Program and have concluded that implementation of this program in the Northeast is feasible and will yield significant vehicle emission reductions which will be needed to attain and maintain compliance with ozone and carbon monoxide National Ambient Air Quality Standards.

3. The California Motor Vehicle Control Program will achieve these essential emission reductions through the phasing in of stringent exhaust standards for hydrocarbons (0.25 grams/mile), nitrogen oxides (0.4 grams/mile), and carbon monoxide (3.4 grams/mile) beginning as early as the 1993 model year in conjunction with the phase in of an extended useful life certification requirement of ten years or 100,000 miles, a comprehensive assembly line testing program, extended warranty provisions, mandatory vehicle onboard diagnostics, and an aggressive vehicle recall program.

4. Since the ozone problem in the Northeast is regional in nature, and motor vehicles are a major contributor to air quality problems in the Northeast, and automobile companies market vehicles regionwide, it is to the Northeast states' advantage to implement a consistent and aggressive program to control vehicle emissions.

Specifically, each of the undersigned state Commissioners intends to propose regulations to adopt motor vehicle emission standards equivalent to California's. Furthermore, the Commissioners recognize that states will retain flexibility in terms of the design and implementation of this program.

Signed this day August 10, 1989.

MICHAEL J. BRADLEY, EXECUTIVE DIRECTOR
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## MEMORANDUM OF UNDERSTANDING
## AMONG THE
## ENVIRONMENTAL COMMISSIONERS OF THE NORTHEAST STATES
## ON
## THE CALIFORNIA MOTOR VEHICLE CONTROL PROGRAM

Signed this day August 10, 1989.

Leslie Carothers

Leslie A. Carothers, Commissioner
Connecticut Department of Environmental Protection

Dean Marriott

Dean Marriott, Commissioner
Maine Department of Environmental Protection

Daniel Greenbaum, Commissioner
Massachusetts Department of Environmental Protection

Robert W. Varney

Robert Varney, Commissioner
New Hampshire Department of Environmental Services

Christopher J. Daggett

Christopher Daggett, Commissioner
New Jersey Department of Environmental Protection

Thomas C Jorling

Thomas C. Jorling, Commissioner
New York Department of Environmental Conservation

Robert L. Bendick, Jr

Robert L. Bendick, Jr., Director
Rhode Island Department of Environmental Management

Jonathan Lash

Jonathan Lash, Secretary
Vermont Agency of Natural Resources

CA MVCP-MOU3;8/3/89

# TESTIMONY BEFORE THE SENATE
# ENVIRONMENTAL PROTECTION SUBCOMMITTEE
# ON
# CLEAN AIR ACT AMENDMENT
# OUTER CONTINENTAL SHELF PROVISIONS
# OF
# S.1630

BY
SANTA BARBARA COUNTY
AIR POLLUTION CONTROL DISTRICT
SEPTEMBER 27, 1989

Honorable Chairman and members of the committee, I am William Wallace and I am hear to speak to you about protecting the health of those people who live in California coastal counties through effective regulation of air pollution from Outer Continental Shelf oil facilities. I am a member of the Board of Supervisors of Santa Barbara County and Chairman of the Board of Directors of Santa Barbara County's Air Pollution Control District. I am also representing the California Air Pollution Control Officers' Association and the County Supervisors Association of California. With me here today is Bill Master, my agency's Assistant Director, who is an expert in the regulation of air pollution from offshore oil facilities. My agency has direct air regulatory authority over a large number of oil and gas facilities onshore and within three miles of the coastline. EPA requires my agency to compensate for Outer Continental Shelf (OCS) emissions even though we do not have air quality regulatory authority to control these emission sources. My agency has, through the necessity of protecting the health of our citizens, gained extensive experience in the evaluation and regulation of air pollution from offshore oil development. I am confident to say that we have more expertise in the affects of air pollution from OCS facilities, and feasible procedures to regulate air pollution from those facilities, than any other agency in the country. It is this extensive experience which I wish to make available to the Committee in support of your efforts to pass legislation which will protect the health of our citizens.

Santa Barbara County like all other southern California coastal counties has unhealthy air. Despite our air pollution control efforts to date, our ozone levels will exceed the health standards set by both federal and state law. It is clear that all sources of pollution, from automobiles to the neighborhood dry cleaner, to major oil facilities must be aggressively controlled if we are to achieve healthy air quality levels. While my agency supports broad legislation governing all sources of air pollution, we intend to confine our statements today to our area of greatest expertise, regulation of air pollution from Outer Continental Shelf oil facilities.

My agency is in strong support of Section 327, regulation of air pollution from OCS facilities, as contained in Senator Baucus' Bill (Attachment 1). This section contains a very simple concept for regulation of OCS air pollution. OCS pollution sources must meet the same air quality regulations as all onshore and nearshore sources of pollution. OCS facilities should be regulated no more, nor less, stringently than onshore facilities. This will ensure that all facilities are developed equitably and that OCS facilities carry their fair-share of the burden for attainment of air quality standards.

Of principal concern to California Coastal counties is, under current federal law, OCS development can interfere with or prevent coastal air pollution control districts from complying with federal and state mandates to protect public health by attaining clean air standards (Attachment 2).* Onshore economic growth could be significantly inhibited if these mandates force coastal counties to over-control onshore industries to compensate for unmitigated OCS pollution. Since over 90 percent of California's oil production occurs onshore and nearshore, an excessive burden on these energy facilities to compensate for unnecessary air pollution offshore could jeopardize the future of energy production within the State of California. This is entirely unsatisfactory when cost-effective clean air technology for OCS projects has already been demonstrated to be practical through its application in the OCS offshore Santa Barbara County.

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*Retained in committee files.

Under Federal Environmental Protection Agency mandate my agency will be adopting over 30 regulations which require pollution reduction in virtually every category of stationary and mobile sources within the county. It is hoped that these extensive air quality control measures will reduce oxides of nitrogen emissions by 1,000 tons per year in order to attain the federal ozone standard. Unregulated OCS air pollution can entirely negate all onshore emission reductions which we are reliant upon to obtain the federal ozone standards. The option of further emission control requirements to compensate for unregulated OCS air pollution could only be done, if at all, with great cost to onshore industries and with substantial disruption to the life-styles of county residents.

Many of you may not realize how significant a pollution source OCS facilities represent. Ozone forming pollutants, sulphur dioxide and particulate matter are emitted in large quantities from offshore exploration, construction, drilling, production, processing, and transportation. Uncontrolled oxides of nitrogen emissions from operation of a single major offshore oil project can easily exceed 1,000 tons per year. Just the construction phase of a major project can easily emit an additional 600 tons of oxides of nitrogen. The drilling of a single offshore exploratory well can release ozone forming pollutants in excess of 50 to 100 tons of oxides of nitrogen. OCS facilities are such large pollution sources because of the enormous amount of power required to run these operations. A two-platform OCS project, currently under construction offshore Santa Barbara County, has a power demand in excess of 40 megawatts--that is enough energy to run a suburban community of roughly 25,000 people. It is clear that air pollution from OCS facilities can interfere with the efforts of coastal counties to attain air quality standards. In fact, if my agency could eliminate all 160,000 automobiles on the roads in my county, this wouldn't be adequate to compensate for the air pollution associated with two large OCS projects which fail to adequately control their air pollution.

You might ask if the requirements to apply the same air quality regulations to OCS projects, as applied to onshore and nearshore projects, could interfere with OCS oil development (See Attachment 3).* The development of the Exxon, Chevron, and Union oil projects offshore Santa Barbara County has made it clear that OCS development can proceed while meeting California's stringent air quality requirements. In fact, the application of air quality requirements equivalent to those used onshore has largely eliminated the roadblocks to these projects and substantially expedited the permit approval and oil development process. As evidenced over the past decade, vague and inconsistent Outer Continental Shelf air pollution regulations result in unresolvable controversy over project design and ensure endless disputes over the development of offshore oil resources. The Exxon Santa Ynez Unit project was delayed by over 15 years in large part due to uncertainty over air quality regulations. Once Exxon agreed to air pollution control regulations consistent with onshore requirements, the entire project was permitted and under construction in less than one year.

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*Retained in committee files.

Cost effective air pollution technology is fully available for offshore oil facilities. Such technology has already been demonstrated to be practical through its application in OCS projects offshore California. In the last five years, OCS oil production in excess of 125 million barrels per year and gas production in excess of 70 billion cubic feet per year have been successfully permitted consistent with California State and local air quality regulations. Net pollution levels have been lowered by 80 to 90 percent in these projects.

These emission reductions have been achieved at very reasonable cost. In fact, in many circumstances, at substantially lower costs than routinely required for air pollution control at onshore facilities along the coast of southern California (Attachment 4).* Yet, due to the totally inadequate nature of the current federal law, even the cheapest air pollution control for OCS facilities have not been required. Let me note, as an example, air pollution control on the large supply boats which travel back and forth to the platforms each day. These boats emit an enormous amount of air pollution. After considerable difficulty, our agency finally convinced Chevron to conduct a cooperative emission control test on their supply boat. We found, that by using off-the-shelf emission reduction procedures, the pollution from the boats could be reduced by about 40 percent, at a cost of under $100 per ton of pollution reduced. Adding a fuel management system to the boat attained another 20 percent reduction in pollution and accomplished a substantial reduction in fuel consumption. This resulted in a dramatic cost savings to the company. It is estimated that the pollution control program for the boat servicing a single Chevron platform will net a profit to Chevron in excess of 1 million dollars due to fuel savings, and will reduce oxides of nitrogen by over 950 tons over the platform lifetime. Don't let anyone tell you that pollution from these OCS facilities cannot be controlled cost-effectively.

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*Retained in committee files.

As the Subcommittee is aware, the President has commissioned a task force to review environmental concerns associated with future OCS lease sales. Another "study" of environmental concerns associated with future lease sales will in no way replace the need for this important legislation. Senator Baucus's legislation addresses the significant air pollution problems associated with existing offshore oil facilities and future oil facilities which are anticipated on the large number of offshore tracks which have already been leased to the oil companies. The President's Task Force fails to address these critically important air pollution problems. By focusing on future lease sales, only a small part of the OCS air pollution problem will be studied. Even for future lease sales, Task Force recommendations will in no way substitute for a clear legislative remedy which ensures OCS facilities carry their fair share of the burden for controlling air pollution and obtaining healthy air quality.

As I hope you can tell by my brief presentation today, my agency has gained a vast amount of experience in regulating air pollution from offshore oil facilities. The simple concept contained in Senator Baucus' bill is critical to effective regulation of OCS facilities. Applying the same regulations to OCS pollution sources, as apply to all onshore and nearshore sources of pollution, will ensure that all facilities are developed fairly and equitably, and that OCS facilities carry their fair share of the burden for obtaining healthy air quality.

This equitable approach to regulation of OCS facilities is supported by air quality agencies throughout the State of California and throughout the nation (Attachment 5-8).*

Failure to require the same air pollution control requirements for OCS facilities:

- o will interfere with or prevent California's coastal communities from attaining federally mandated clean air standards;

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*Attachments 7 and 8 have been retained in committee files.

- will contribute to unhealthful air affecting millions of people who reside in California's coastal communities;

- and will impede onshore economic growth and energy development within the state.

I would like to thank Senator Baucus and the co-sponsors for this legislation. I would also like to thank Senator Wilson and Senator Cranston for their support of this legislation.

In the interest of protecting citizens within my county, I urge your support for the OCS provisions within this Clean Air Act Amendment.

Mr. Chairman, simply put, it is impossible for us to protect the health of our citizens unless the OCS is properly regulated.

Thank you.

List of Attachments

1: S.1630--Air Pollution from Outer Continental Shelf Activities.

2: Santa Barbara County Letter on Interior Department's Proposed OCS Rule.

3: "Commonly Asked Questions Pertaining to the Resolution on Air Pollution from OCS Facilities."

4: "Cost-effective Air Pollution Control for Offshore Oil Development."

5: STAPPA/ALAPCO Resolution on the Regulation of Outer Continental Shelf Activities

6: County Supervisors Association of California and California Air Pollution Control Officers Association Resolution on the Regulation of OCS Activities.

7: U.S. Environmental Protection Agency Letter on Interior Department's Proposed OCS Rule.

8: California Air Resources Board Letter on Interior Department's Proposed OCS Rule.

# Attachments to the
# Testimony Before the
# Senate Environmental Protection Subcommitte
# on
# Clean Air Act Amendment
# Outer Continental Shelf Provisions
# of
# S.1630

By

Santa Barbara County
Air Pollution Control District

September 27, 1989

## OUTER CONTINENTAL SHELF ACTIVITIES

SEC. 110. Title III of the Clean Air Act is amended by adding the following new section after section 326:

"AIR POLLUTION FROM OUTER CONTINENTAL SHELF ACTIVITIES

"SEC. 327. (a) APPLICABLE REQUIREMENTS.--Not later than twelve months after the enactment of this section, the Administrator, by rule, shall establish requirements to control air pollution from outer continental shelf sources ('OCS sources'). Such requirements shall be the same as would be applicable if the source were located in the corresponding onshore area. Such requirements shall take effect with respect to new or modified sources on the date of promulgation and with respect to existing sources on the date twelve months thereafter. The authority of this section shall supersede any inconsistent authorities established under other law. Each requirement established under this section shall be treated, for purposes of sections 113, 114, 116, 120, and 304, as a standard under section 111.

"(b) STATE PROCEDURES.--Each State adjacent to an OCS source may develop and submit to the Administrator a procedure for implementing and enforcing the requirements promulgated by the Administrator under subsection (a) for OCS sources. If the Administrator finds that the State procedure is adequate he shall delegate to that State any authority he has under this Act to implement and enforce such requirements.

"(c) DEFINITIONS.--For purposes of this section--

"(1) The term 'Outer Continental Shelf' has the meaning provided by section 2 of the Outer Continental Shelf Lands Act (43 U.S.C. 1331).

"(2) The term 'corresponding onshore area' means, with respect to any OCS source, the onshore attainment or nonattainment area that is closest to the source, unless the Administrator determines that another area with more stringent requirements may reasonably be expected to be affected by such emissions. Such determination shall be based on the potential for air pollutants from the OCS source to reach the other onshore area and the potential of such air pollutants to affect the efforts of the other onshore area to attain or maintain any Federal, State, or local ambient air quality standard or to comply with the provisions of part C.

"(3) The terms 'Outer Continental Shelf Source' and 'OCS source' includes any equipment, activity, or facility which (A) emits or has the potential to emit any air pollutant, (B) is regulated or authorized under the Outer Continental Shelf Lands Act, and (C) is located on the Outer Continental Shelf or in or on waters above the Outer continental Shelf. Activities include, but are not limited to, exploration, construction, development, processing, and transportation. Emissions from any vessel servicing or associated with an OCS source, including emissions while at the OCS source or en route to or from the OCS source and the corresponding onshore area, shall be considered emissions from that OCS source.".

Attachment 5

STAPPA | ALAPCO

STATE AND TERRITORIAL
AIR POLLUTION PROGRAM
ADMINISTRATORS

ASSOCIATION OF
LOCAL AIR POLLUTION
CONTROL OFFICIALS

S. WILLIAM BECKER
EXECUTIVE DIRECTOR

## STAPPA/ALAPCO RESOLUTION ON THE REGULATION OF OUTER CONTINENTAL SHELF ACTIVITIES

WHEREAS, pursuant to the Outer Continental Shelf Lands Act, the Department of the Interior (DOI) has authority to control air pollution from oil and gas facilities and activities located on the Outer Continental Shelf (OCS);

WHEREAS, pursuant to the Clean Air Act, the Environmental Protection Agency (EPA) has authority to control air pollution from onshore sources;

WHEREAS, the Clean Air Act requires state and local air pollution control agencies to develop State Implementation Plans (SIPs) to attain and maintain National Ambient Air Quality Standards;

WHEREAS, many coastal areas of states are not attaining the National Ambient Air Quality Standards;

WHEREAS, EPA has found the SIPs for some coastal areas to be inadequate and has required that such SIPs be revised to demonstrate attainment and maintenance of the National Ambient Air Quality Standards;

WHEREAS, offshore oil platforms, storage and treatment facilities and related support facilities and activities are sources contributing to exceedances of the National Ambient Air Quality Standards;

WHEREAS, emissions from OCS facilities and activities exacerbate the existing nonattainment problems in some coastal areas;

WHEREAS, EPA requires that emissions from OCS facilities and activities be accounted for and included in some SIPs;

WHEREAS, DOI's air pollution control requirements for OCS facilities and activities are less stringent than onshore air pollution control requirements; and

-over-

WHEREAS, oil and gas development activities located in state waters must conform to onshore air pollution control requirements;

NOW, THEREFORE, BE IT RESOLVED that STAPPA and ALAPCO recommend that OCS facilities and activities be subject to the same air pollution control requirements as those which apply in the nearest adjacent onshore area for similar facilities and activities.

FURTHERMORE, BE IT RESOLVED that the federal agency responsible for implementing OCS control requirements should be explicitly required by the Clean Air Act to assure compliance by all offshore sources.

Adopted: April 11, 1989

ATTACHMENT 6

# COUNTY SUPERVISORS ASSOCIATION OF CALIFORNIA
# RESOLUTION ON AMENDMENT TO THE CLEAN AIR ACT ON THE REGULATION OF OUTER CONTINENTAL SHELF ACTIVITIES

WHEREAS, pursuant to the Clean Air Act, the Environmental Protection Agency (EPA) has authority to control air pollution from onshore and state tidelands sources;

WHEREAS, the Clean Air Act requires state and local air pollution control agencies to develop State Implementation Plans (SIPS) to attain and maintain National Ambient Air Quality Standards;

WHEREAS, many coastal areas of states are not attaining the National Ambient Air Quality Standards;

WHEREAS, EPA has found the SIPs for some coastal areas to be inadequate and has required that such SIPs be revised to demonstrate attainment and maintenance of the National Ambient Air Quality Standards,

WHEREAS, the Clean Air Act allows states to adopt health based ambient air quality standards that are more stringent than the national ambient air quality standards;

WHEREAS, California has adopted state ambient air quality standards and has passed the California Clean Air Act requiring each county in the state to attain and maintain California clean air standards;

WHEREAS, offshore oil exploration, development, production, processing and related marine transportation activities are substantial sources of pollution which contribute to exceedances of the National and the State Ambient Air Quality Standards;

WHEREAS, emissions from OCS facilities have the potential to interfere with or prevent attainment of air quality standards in some coastal areas;

WHEREAS, EPA requires that emissions from OCS facilities and activities be accounted for and included in some SIPS;

WHEREAS, current air pollution control requirements for OCS facilities and related activities do not protect onshore air quality;

WHEREAS, the lack of equivalent air quality regulations on OCS pollution sources forces counties to compensate for unmitigated OCS emissions by further controlling onshore industries and place an unfair and costly burden on these onshore industries; and

WHEREAS, cost-effective clean air technology has already been demonstrated to be practical for OCS sources through its application offshore Santa Barbara and Ventura Counties;

NOW, THEREFORE, BE IT RESOLVED that CSAC recommend that all OCS facilities and related activities be subject to the same air pollution control regulations as those which apply in the adjacent onshore area, including the protection of state ambient air quality standards.

FURTHERMORE, BE IT RESOLVED that the air quality regulation for the OCS sources should be promulgated by the Environmental Protection Agency (EPA) so as to meet all the requirements of the Clean Air Act and ensure protection of state air quality standards, and that EPA shall delegate permit authority to the state or local agency responsible for the issuance of air quality permits.

Adopted:

Also adopted by California Air Pollution Officers Association
Board of Directors September 21, 1989

bc273.bxc

# TESTIMONY OF
# MAYOR HENRY W. WEDAA
# VICE CHAIRMAN OF THE BOARD
# SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

S. 1630

SEPTEMBER 27, 1989

MR. CHAIRMAN, DISTINGUISHED COMMITTEE MEMBERS, FOR THE RECORD, MY NAME IS HENRY WEDAA. I AM MAYOR OF THE CITY OF YORBA LINDA, CALIFORNIA, AND I REPRESENT THE 27 CITIES OF ORANGE COUNTY ON THE SOUTH COAST AIR QUALITY DISTRICT BOARD. I AM HERE TODAY AS VICE CHAIRMAN OF THE BOARD TO EXPRESS OUR SUPPORT FOR ADOPTION OF AN AGGRESSIVE CLEAN AIR ACT DURING THIS SESSION OF CONGRESS. WE ARE PLEASED THAT THE PRESIDENT HAS TAKEN A LEADERSHIP ROLE IN THE CLEAN AIR DEBATE WITH THE INTRODUCTION OF HR 3030. HOWEVER, THE ADMINISTRATION'S OZONE ATTAINMENT PROVISIONS DO NOT ADDRESS THE SOUTH COAST AIR BASIN'S SPECIAL PROBLEMS. THEREFORE, I WILL FOCUS MY REMARKS ON S. 1630 OFFERED BY SENATORS BAUCUS AND CHAFEE. WE THINK S. 1630 BALANCES STRONG REGULATORY MANDATES WITH FLEXIBLE MARKET BASED INCENTIVES NEEDED TO ENCOURAGE TECHNOLOGICAL INNOVATION. THIS BALANCE IS PARTICULARLY IMPORTANT IN THE SOUTH COAST AIR BASIN, WHICH

AS YOU KNOW HAS THE MOST SEVERE AIR QUALITY PROBLEM IN THE NATION.

AQMD STAFF HAVE PREPARED DETAILED WRITTEN COMMENTS WHICH I AM SUBMITTING FOR THE RECORD. I HAVE ALSO BROUGHT FOR YOUR CONSIDERATION THE EXECUTIVE SUMMARY OF A RECENTLY COMPLETED HEALTH COST BENEFIT ANALYSIS WHICH MY BOARD COMMISSIONED TO BETTER DETERMINE THE VALUE OF CLEANING UP THE AIR IN SOUTHERN CALIFORNIA. THIS STUDY, CONDUCTED BY A MULTI-DISCIPLINARY TEAM OF SCIENTISTS, HEALTH RESEARCHERS AND ECONOMISTS SHOWS THAT AIR POLLUTION COSTS MONEY. JUST MEETING THE FEDERAL OZONE AND PM10 STANDARDS COULD SAVE THE BREATHERS OF SOUTHERN CALIFORNIA SOME $9.4 BILLION PER YEAR IN HEALTH COSTS, AND THAT'S A CONSERVATIVE ESTIMATE. IF WE TAKE INTO ACCOUNT THE DAMAGE TO CROPS AND MATERIALS, SOUTHERN CALIFORNIANS MAY WELL PAY TWICE THAT AMOUNT FOR DIRTY AIR. I URGE YOU TO KEEP OUR HEALTH BENEFIT STUDY IN MIND WHEN OTHERS ARE ARGUING THAT CLEAN AIR COSTS TOO MUCH.

I WOULD LIKE TO FOCUS MY REMAINING COMMENTS ON TWO IMPORTANT AREAS -- THE NEED FOR A STRONG FEDERAL CONTROL EFFORT AND THE IMPORTANCE OF NOx CONTROLS ON NEW AND EXISTING SOURCES. I CANNOT EMPHASIZE ENOUGH HOW IMPORTANT IT IS THAT THE ENVIRONMENTAL PROTECTION AGENCY BE A FULL PARTNER IN THE CLEANUP OF OUR NATION'S SKIES. IF EPA DOES NOT MOVE AGGRESSIVELY TO CONTROL THOSE SOURCES

THAT ARE WITHIN ITS REGULATORY DOMAIN, THE SOUTH COAST CAN NEVER MEET THE HEALTH-BASED AIR QUALITY STANDARDS. LET ME AMPLIFY THIS POINT BRIEFLY.

THE AIR QUALITY MANAGEMENT PLAN THAT OUR BOARD ADOPTED EARLIER THIS YEAR ESTIMATES THAT THE 2300 TONS OF REACTIVE ORGANIC GASES AND OXIDES OF NITROGEN WE PUT INTO OUR AIR EACH DAY MUST BE CUT TO ABOUT 400 TONS PER DAY IN ORDER TO ATTAIN THE FEDERAL OZONE STANDARD. THAT CONSTITUTES AN 83 PERCENT REDUCTION IN EMISSIONS OVER THE NEXT TWENTY YEARS, EVEN IN THE FACE OF A CONSERVATIVELY EXPECTED 37 PERCENT POPULATION INCREASE AND ALMOST 50 PERCENT JOB INCREASE. WE'RE WILLING TO DO OUR PART ON THE STATE AND LOCAL LEVELS TO GET THE JOB DONE.

HOWEVER, AS THIS EXHIBIT ILLUSTRATES, JUST OVER 700 TONS OF ROG AND NOx PER DAY COME FROM SOURCES UNDER EPA's PURVIEW, INCLUDING CARS, TRUCKS AND BUSES BUILT TO FEDERAL EMISSIONS CONTROL STANDARDS, AS WELL AS SUCH SOURCES AS AIRPLANES, TRAINS, SHIPS, AEROSPACE AND MILITARY FACILITIES, CONSUMER SOLVENTS, AND PESTICIDES. EVEN IF TODAY'S FEDERALLY CONTROLLED EMISSIONS WERE CUT IN HALF, THEY WOULD STILL EMIT ABOUT 360 TONS PER DAY. THIS WOULD LEAVE OUR REGION WITH THE IMPOSSIBLE TASK OF REDUCING LOCALLY CONTROLLED EMISSIONS FROM 1590 TO ONLY 40 TONS PER DAY. THE REQUIREMENT THAT EPA ADOPT NATIONWIDE CONTROL TECHNOLOGY GUIDELINES (CTGs) FOR 12 SOURCE CATEGORIES IS

AN IMPORTANT SIGNAL THAT CONGRESS WANTS EPA TO GET SERIOUS ABOUT EMISSIONS CONTROL.

AS IMPORTANT AS IT IS FOR CONGRESS TO DEMAND THAT EPA MOUNT AN AGGRESSIVE FEDERAL CONTROL PROGRAM, IT IS EQUALLY CRITICAL THAT STATES AND LOCAL AREAS BE ALLOWED TO MOVE MORE RAPIDLY WHERE NECESSARY. CALIFORNIA HISTORICALLY HAS LED THE NATION IN CONTROLLING BOTH STATIONARY AND MOBILE SOURCES. WE URGE YOU TO RETAIN ALL PROVISIONS ALLOWING US TO CONTINUE TO PUSH TECHNOLOGY AND AVOID ANY FEDERAL PRE-EMPTIONS.

WE ALSO STRONGLY SUPPORT THE MOTOR VEHICLE CONTROL PROGRAM PROPOSED IN THE BILL, ESPECIALLY THE VEHICLE TESTING AND CERTIFICATION PROCEDURES, THE USEFUL LIFE PROVISIONS, THE REQUIREMENT FOR ON-BOARD DIAGNOSTIC SYSTEMS, ONBOARD CONTROL OF EVAPORATIVE EMISSIONS DURING REFUELING, AND THE TECHNOLOGY- FORCING EMISSION STANDARDS FOR THE YEAR 2003. WE APPLAUD THE BILL'S REQUIREMENT THAT THE EPA ADMINISTRATOR PROMULGATE EMISSIONS STANDARDS FOR LOW-POLLUTING VEHICLES.

I MIGHT NOTE, HOWEVER, THAT WE BELIEVE THAT WE WILL NEED AN ULTRA LOW POLLUTING VEHICLE FLEET IN THE SOUTH COAST IF WE ARE TO MEET THE OZONE STANDARD. THAT WILL MEAN GOING BEYOND EVEN THE EMISSION STANDARDS TARGETED IN THIS BILL. WE DOUBT THAT CONVENTIONALLY FUELED VEHICLES WILL BE

ABLE TO MEET SUCH A REQUIREMENT. THEREFORE, WE WOULD LIKE TO SEE A FEDERAL COMMITMENT TO THE DEVELOPMENT OF CLEAN FUEL VEHICLES. CERTAINLY, THE PROPOSAL PUT FORWARD BY THE ADMINISTRATION IS AN IMPORTANT STEP IN THIS DIRECTION. WE ALSO THINK THAT INCLUSION OF A CLEAN FUEL PROGRAM IN S. 1630 WILL HELP EASE GLOBAL WARMING PROBLEMS CREATED BY AUTOMOBILES, AN ISSUE THE BILL RECOGNIZES BY REQUIRING THE PROMULGATION OF A CARBON DIOXIDE EMISSION LIMIT.

FINALLY WITH RESPECT TO ONROAD MOTOR VEHICLES, WE WOULD LIKE TO ENSURE THAT AREAS SUCH AS THE SOUTH COAST HAVE THE ABILITY TO REGULATE BOTH PRIVATE AND COMMERCIAL VEHICLE MOVEMENT ON FREEWAYS TO EASE CONGESTION AND REDUCE AIR POLLUTION. THIS INCLUDES HEAVY TRUCKS, WHICH, WHILE THEY ONLY CONSTITUTE 10 PERCENT OF THE VEHICLES, ACCOUNT FOR ALMOST 30 PERCENT OF THE CONGESTION.

WE ALSO WOULD LIKE SPECIFIC PROVISIONS INCLUDED IN THE BILL FOR CONTROL OF EMISSIONS FROM OFF-ROAD VEHICLES POWERED BY OTHER THAN INTERNAL COMBUSTION ENGINES. WE ARE CONCERNED ESPECIALLY ABOUT LOCOMOTIVE AND AIRCRAFT ENGINES. THE TECHNOLOGY EXISTS TODAY TO MAKE THESE ENGINES CLEANER, AND IT SHOULD BE REQUIRED. IN FACT, IN MY OWN COUNTY, BECAUSE OF THE SERIOUS COMMUNITY CONCERN OVER NOISE, THE ONLY COMMERCIAL AIRCRAFT THAT CAN USE OUR AIRPORT HAVE THE NEW GENERATION OF ULTRA-QUIET

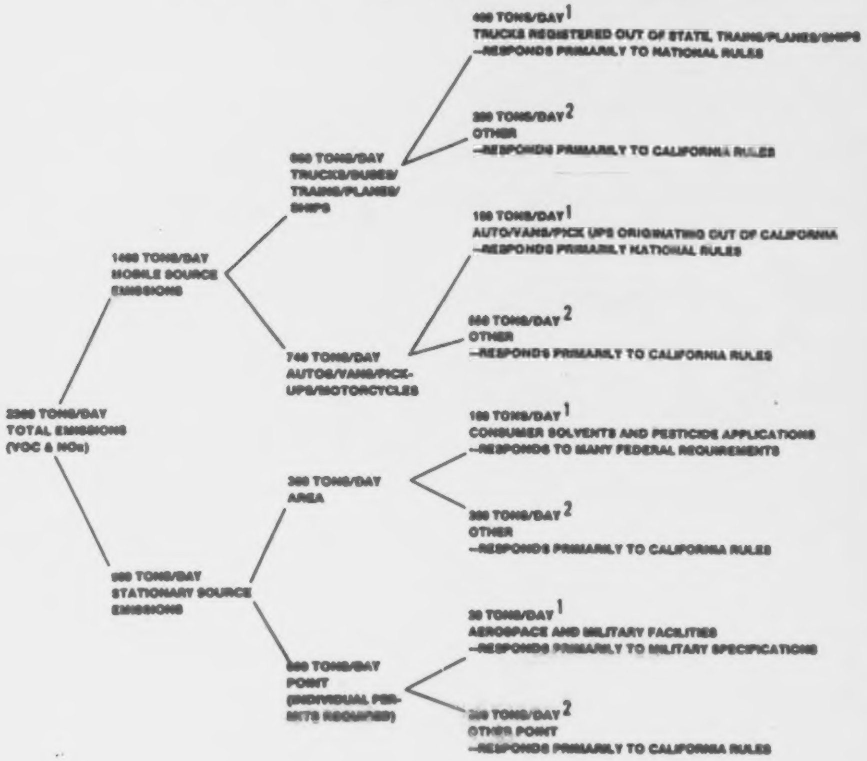
ENGINES. THESE AIRCRAFT CAN MAKE NONSTOP CROSS-COUNTRY TRIPS AND PRODUCE SUBSTANTIALLY FEWER EMISSIONS THAN THE OLDER, NOISIER MODELS. THERE IS NO REASON WHY THE NEWER QUIETER, CLEANER, MORE FUEL EFFICIENT AIRCRAFT ENGINES SHOULD NOT BE REQUIRED ON ALL AIRCRAFT.

MY FINAL POINT HAS TO DO WITH THE ROLE OF NOx CONTROL IN ACHIEVING OUR AIR QUALITY GOALS. THE SOUTH COAST AIR QUALITY MANAGEMENT PLAN CALLS FOR REDUCTION OF BOTH ROG AND NOx EMISSIONS TO MEET THE FEDERAL OZONE STANDARD. THERE ARE TWO REASONS FOR THIS DUAL CONTROL APPROACH. FIRST OF ALL, OUR LONGTERM AIR QUALITY TRENDS SHOW THAT AIR QUALITY IN THE REGION HAS IMPROVED MORE RAPIDLY SINCE WE IMPLEMENTED NOx CONTROLS THAN WHEN WE CONTROLLED ROG ALONE. OUTSIDE OUR REGION, THE RECENT STUDIES OF NATURALLY OCCURRING HYDROCARBONS IN ATLANTA ALSO SUGGEST THAT NOx CONTROL MAY BE AN IMPORTANT FACTOR IN OZONE ATTAINMENT. IN ATLANTA'S CASE, THE AREA HAS SUCH A HIGH LEVEL OF NATURALLY OCCURRING ROG THAT NOx CONTROL MAY BE THE ONLY WAY TO MEET THE OZONE STANDARD. IN SETTING FORTH THE CONTROL REQUIREMENTS FOR SEVERE AND EXTREME NONATTAINMENT AREAS, THE BILL INCLUDES NOx IN THE EMISSION FEE REQUIREMENT. HOWEVER, IT IS IMPORTANT THAT THE YEARLY EMISSIONS REDUCTION REQUIREMENTS APPLY TO NOx AS WELL AS ROG, UNLESS A REGION DEMONSTRATES THAT NOx CONTROL IS NOT NEEDED TO ATTAIN ANY FEDERAL STANDARD.

THE PM10 ATTAINMENT PROVISIONS DO NOT MENTION NOx AT ALL, EVEN THOUGH IN THE SOUTH COAST A SIGNIFICANT PORTION OF OUR PROBLEM STEMS FROM SECONDARY NOx AEROSOLS, AND THE BROWN CLOUD STUDIES IN DENVER INDICATE THAT NOx IS AN IMPORTANT CONTRIBUTOR TO PM10 THERE, AS WELL. I SUSPECT THAT OTHER REGIONS MAY HAVE A SIMILAR PROBLEM. I WOULD ALSO POINT OUT THAT NOx IS ACKNOWLEDGED AS A PRECURSOR TO ACID RAIN. INDEED, THE ADMINISTRATION'S ACID RAIN PROPOSAL CALLS FOR NATIONWIDE REDUCTIONS IN BOTH SULFUR DIOXIDE AND NOx EMISSIONS. NOx IS A FACTOR IN SO MANY POLLUTION PROBLEMS - OZONE, PM10, ACID DEPOSITION, VISIBILITY - THAT WE THINK THE CLEAN AIR ACT SHOULD INCLUDE A SPECIFIC NOx CONTROL PROGRAM. IN ADDITION TO THE YEARLY REDUCTION TARGET, THE MAJOR SOURCE THRESHOLD FOR NOx SOURCES SHOULD BE LOWERED TO CORRESPOND TO THE ROG THRESHOLD IN OZONE NONATTAINMENT AREAS, AND CTGs SHOULD BE ESTABLISHED FOR IMPORTANT STATIONARY SOURCE CATEGORIES.

AS I MENTIONED EARLIER, I HAVE PROVIDED MORE DETAILED WRITTEN COMMENTS. THANK YOU FOR THE OPPORTUNITY TO TESTIFY AND EXPRESS SUPPORT FOR THIS BILL. WE LOOK FORWARD TO WORKING WITH YOU TO MOVE THIS BILL FORWARD AND ENSURING THAT A STRONG CLEAN AIR ACT IS ADOPTED IN THIS CONGRESS. BOTH MY DEPUTY EXECUTIVE OFFICER AND I WOULD BE PLEASED TO ANSWER ANY QUESTIONS YOU MAY HAVE.

# APPROXIMATE EMISSIONS FROM SOUTH COAST BASIN SOURCES


2300 TONS/DAY
TOTAL EMISSIONS
(VOC & NOx)
1400 TONS/DAY
MOBILE SOURCE
EMISSIONS
660 TONS/DAY
TRUCKS/BUSES/
TRAINS/PLANES/
SHIPS
400 TONS/DAY 1
TRUCKS REGISTERED OUT OF STATE, TRAINS/PLANES/SHIPS
—RESPONDS PRIMARILY TO NATIONAL RULES
260 TONS/DAY 2
OTHER
—RESPONDS PRIMARILY TO CALIFORNIA RULES
740 TONS/DAY
AUTOS/VANS/PICK-
UPS/MOTORCYCLES
180 TONS/DAY 1
AUTO/VANS/PICK UPS ORIGINATING OUT OF CALIFORNIA
—RESPONDS PRIMARILY NATIONAL RULES
560 TONS/DAY 2
OTHER
—RESPONDS PRIMARILY TO CALIFORNIA RULES
900 TONS/DAY
STATIONARY SOURCE
EMISSIONS
300 TONS/DAY
AREA
100 TONS/DAY 1
CONSUMER SOLVENTS AND PESTICIDE APPLICATIONS
—RESPONDS TO MANY FEDERAL REQUIREMENTS
200 TONS/DAY 2
OTHER
—RESPONDS PRIMARILY TO CALIFORNIA RULES
600 TONS/DAY
POINT
(INDIVIDUAL PER-
MITS REQUIRED)
30 TONS/DAY 1
AEROSPACE AND MILITARY FACILITIES
—RESPONDS PRIMARILY TO MILITARY SPECIFICATIONS
570 TONS/DAY 2
OTHER POINT
—RESPONDS PRIMARILY TO CALIFORNIA RULES

☐ IN ORDER TO MEET ALL FEDERAL AIR QUALITY STANDARDS, THE DISTRICT NEEDS TO ACHIEVE VOC AND NOx EMISSIONS OF 400 TONS/DAY

[1] 710 TONS/DAY-RESPONDS PRIMARILY TO NATIONAL CONTROL PROGRAMS

[2] 1590 TONS/DAY-RESPONDS PRIMARILY TO CALIFORNIA CONTROL PROGRAMS

# ECONOMIC ASSESSMENT OF THE HEALTH BENEFITS FROM IMPROVEMENTS IN AIR QUALITY IN THE SOUTH COAST AIR BASIN

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Final Report to

South Coast Air Quality Management District

Contract No. 5685

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# 1.0 EXECUTIVE SUMMARY

## 1.1 Introduction

Air quality conditions in the South Coast Air Basin (SoCAB) are among the worst in the nation. Despite the adoption of strict air pollution control measures during the past twenty years, air quality in the SoCAB still fails to meet most of the ambient air quality standards established by the U.S. Environmental Protection Agency (EPA) and the California Air Resoures Board (CARB) for the protection of public health. The health-based standards for ozone, PM-10 and carbon monoxide are exceeded frequently and often by large amounts. While the SoCAB is in compliance with the standards for sulfur dioxide and lead, the standards for nitrogen dioxide are still exceeded in the western and central portions of the basin.

The Federal air quality standard (AQS) of 0.12 ppm for ozone is exceeded on more than 120 days each year in the SoCAB. In years with particularly adverse meteorological conditions (such as 1988), the Federal ozone standard is exceeded on about 180 days. Exceedances of the 0.09 ppm California ozone AQS are even more frequent. The highest 1-hour average ozone concentrations in recent years are about three and four times greater than the Federal and California ozone standards, respectively.

Ambient concentrations of respirable particulate matter (PM-10) exceed the Federal and California annual average air quality standards by 80% and 200%, respectively. Exceedances of the Federal and California 24-hour average standards occur on 15% and 70% of all days in the SoCAB. PM-10 air quality in the SoCAB exceeds the Federal and state 24-hour standards of 150 and 50 $\mu g/m^3$ by 100% and 500%, respectively. Similarly, carbon monoxide concentrations exceed the Federal and state 8-hour standard on approximately 40 days per year.

Maximum 8-hour average carbon monoxide concentrations exceed the applicable standards by more than 200%.

The combined data for ozone, PM-10, and CO exceedances clearly show that the SoCAB's air quality problem is severe. The fundamental reason for the problem is that, given present air pollution control technology, too many people live and work in an area where the topographical and meteorological conditions are particularly conducive to the formation and build-up of air pollutants. While increasingly stringent emission control programs adopted in the last two decades have resulted in improved air quality, substantial additional emission controls will be needed to bring the SoCAB into compliance with applicable standards, especially in light of the 37% growth in population expected during the next twenty years.

While public support for further improving air quality in the SoCAB remains high, new initiatives to reduce public exposure to unhealthy levels of pollution will almost certainly require some sacrifices by all residents. As a result, there is increasing pressure to determine the costs of new regulations. At the same time, since poor air quality continues to impose costs on people who live in the basin, it is important to determine, in economic terms, what the public health benefits of achieving cleaner air will be.

Historically, while considerable attention has been given to assessing the air quality benefits and costs of control measures, relatively less attention has been given to quantifying the health benefits and their economic value. Clearly, this effort is needed to provide an overall assessment of the costs and benefits of achieving the clean air goals. Attaching a dollar value to better health is more difficult than demonstrating something simpler, like the fact that measles shots prevent disease in individuals who are inoculated.

This study establishes and quantifies relationships between air quality, the amount of pollution people actually breathe, the health effects of breathing that much pollution, and the economic benefits of preventing those effects.

The characterization and linkages that must be established and measured or estimated in order to calculate economic benefits of improved air quality are:

- current and future air pollution exposure,
- human dosage of pollutants,
- human response to various levels of pollution, and,
- economic valuation of the response.

Each component of the process is important to the overall assessment. Weaknesses in the knowledge of and linkage between any of the processes can undermine accurate economic valuation of health-related benefits.

The present state of knowledge does not allow all adverse health effects that have been identified to be measured and valued in dollars. The contribution of air pollution to chronic illness and to reduction in lung function are two important impacts that have not been translated into economic terms. Carbon monoxide-related effects are also not quantifiable because the links between carboxyhemoglobin levels in the blood and symptoms such as angina are not adequately quantified in the health effects literature.

It is important to note that air pollution causes other serious damage in addition to adverse effects on health. In a recent study by Rowe and Chestnut (1986), damage to agriculture and forestry as well as adverse health effects and reduced visibility were valued. They found that health damage accounted for about 60% of the total measured economic harm caused by failing to meet the AQS. Consequently, the effects that are valued in the present study probably represent less than half of the benefits of attaining the Federal AQS in this basin. When effects outside the basin caused by pollution generated in the SoCAB are considered, it is clear that the total value of the effects reported here substantially underestimate the total benefits of attainment. Figure E-1 illustrates the effects that are not incorporated in the economic values reported in the present study.

In this volume, the exposure and health effects analyses that support the economic valuation reported in the present study are summarized, the economics methodology is described and the study results are presented. There are two companion volumes that report the detailed efforts in exposure and health. Development and operation of the exposure model is included in, "Characterization of Air Pollutant Exposures in the California South Coast Air Basin: Application of a New Regional Human Exposure (REHEX) Model," by Arthur M. Winer, Frederick W. Lurmann, Lori A. Coyner, Steven D. Colome, and Minn P. Poe, hereinafter referred to as Winer et al., 1989. Review of the health literature and development of dose-response functions are reported in, "Effects on Human Health of Pollutants in the South Coast Air Basin," by Michael T. Kleinman, Steven D. Colome, and Donna Foliart, hereinafter referred to as Kleinman et al., 1989.

### 1.2 The Approach

To identify and establish the links between poor air quality and the health-related economic benefits of cleaner air, a three stage approach was used. The first stage was to determine the levels of pollution to which basin residents are exposed, and the dose of pollution they receive on an annual basis. The dose is the total quantity of pollution that reaches an individual's respiratory system or other sensitive area, such as the eye, in a given period of time.

Because of the lack of direct observational data for human exposure and dose in the SoCAB, and the complexity in estimating human dose for a large urban population, a computer model was developed. The model, named the Regional Human Exposure (REHEX) model, calculates the distributions of pollutant exposure and dose received by residents of the air basin. It is designed to account for the spatial and temporal distributions of pollutant concentrations, and the amount of time people spend indoors, in transit, and outdoors on weekdays and on weekends. These factors are recognized as important determinants of exposure. The REHEX model also incorporates information concerning the levels of exercise in which different demographic groups are likely to engage during various times of the day. Exercise levels are important factors in determining the human dose to air pollutants.

The REHEX model was applied to the SoCAB to estimate the current and future distributions of exposure and human dosage. The baseline distributions were based on observed air quality for the 1984-1986 period. Future distributions were calculated using air quality conditions reflecting compliance with the Federal and California air quality standards.

The rollback procedures employed in this study, wherein we assumed that concentrations at all monitors would be reduced as pollution levels approach attainment, were judged to be the most likely scenarios for meeting these standards over the next 15 years. The difference between the baseline and future distributions of exposure and dose were used as inputs to the dose-response model, which quantifies the health benefits of meeting the air quality standards.

The second element of our approach was to develop dose-response functions for adverse health effects that could be quantified and for which exposure and economic data were extensive enough to support the calculation of economic benefits of reducing those effects. To do this, all documents relied upon in setting air quality standards were reviewed, along with all relevant research results published since the standards were last reviewed. After the health and economics literatures were reviewed, the benefits of reducing the effects shown in Table E-1 could be valued in dollars.

Information about the effects of pollution on human health comes from three methods of study: human clinical experiments, epidemiological studies, and animal toxicologic studies. Each method has some limitations when taken alone. Taken together, however, these three methods allow deductive combination of the evidence so that an accurate understanding of health risks can be developed.

In most previous studies, relationships between adverse health effects (any effect which causes noticeable discomfort, causes an individual to reduce or curtail normal activities, or is life-threatening) and pollution were largely developed to support the setting of Federal or state air quality standards at a level that would prevent most effects in most of the population. Thus, this information focused on finding a threshold, rather than on establishing a mathematical relationship between levels of pollution above that threshold and the frequency of adverse health effects. The difference in focus complicated the task of developing dose-response relationships for some pollutants (carbon monoxide, for example). Clear relationships were established, however, for many effects related to ozone and to PM-10. Figure E-2 illustrates the range and complexity of human response to air pollution and highlights what could not be quantified in this study.

In our review of the health effects literature and efforts to derive dose-response functions, we relied where possible on data from biomedically-based studies. Many of the results are corroborated by data from other types of studies and this work is also reported in Kleinman et al., as are other related studies.

The third element of our effort to link poor air quality to economic values was the selection or development of dollar values associated with preventing the adverse effects shown in Table E-1. There are two approaches to placing a value on an averted health risk or symptom. The most familiar to most people is simply determining the direct, market-measured cost (referred to as cost of illness (COI)) of an effect and using that to value the benefit of reduced occurrences.

For many symptoms that produce discomfort, but do not necessarily restrict activity, there are no market values. Similarly, there are no direct measures of how much we value small reductions in the risk of death in a given year. Consequently, the economic value of some effects is estimated from contingent valuation studies (surveys) or by hedonic studies where, for example, the difference in wages between jobs with different risks of death is calculated to evalulate how much it is worth to reduce such risks.

After all three elements of our approach were in place, dose and exposure estimates from the REHEX model were used to calculate the reduction in adverse effects expected to result from meeting the Federal and state AQS. The economic values from COI, hedonic and CV studies were used to estimate the economic benefit, in dollars, of these reductions in adverse effects. The health and economic studies relied on to develop final dollar values for each symptom are highlighted in Tables E-4 and E-5.

### 1.3 Study Results

In the present study we estimate:

- The quality of air that residents of the SoCAB are exposed to.

- The extent of public exposure to air defined as unhealthy by the Federal and California governments.
- The reduction of adverse effects expected to occur as air quality improves.
- The economic benefits of reduced discomfort, illness and risk of death resulting from better air quality.

### 1.3.1 Exposure and Dose

The REHEX model results show that during the 1984-1986 base years employed in this study, 98% of the residents of the basin were exposed at least once a year to ozone concentrations in excess of the Federal AQS of 12 pphm. They also show that about 6.5 million, or more than 50% of the population, were exposed to ozone concentrations greater than 20 pphm, the Stage I Alert threshold. At the upper end of the exposures, more than 200,000 individuals, or about 2% of the population, were exposed to ozone concentrations greater than 36 pphm, which is over the Stage II Alert level, and a factor of three above the Federal AQS for ozone.

Exposure estimates clearly show that some demographic groups are exposed disproportionately to elevated ozone concentrations. For example, while infants and the elderly experience the lowest ozone exposures per capita (because they spend less time outdoors than other groups), school age children, college students, and adults working outdoors experience the highest ozone exposure per capita. School age children as a group will experience the greatest benefit from meeting the ozone AQS, since while they constitute less than 20% of the basin population, over 40% of the symptoms occur in their group.

There are also significant differences in elevated ozone exposure among the populations of the four counties in the basin. For example, in San Bernardino County, nearly 65% of the population is exposed to 20 pphm of ozone once or more per year, while in Los Angeles and Riverside Counties, almost 60% and 50% of the residents, respectively, experience ozone above 28 pphm. In Orange County, the corresponding number is nearly 40%. Interestingly, a greater percentage of residents of Los Angeles County experience the highest ozone levels (>36pphm) (these levels occurred only in the eastern portion of this county during the 1984-86 study period).

In summary, while the ozone epicenter in the SoCAB is clearly in the eastern portion of Los Angeles County, the finding that approximately 40% or more of the population in all four counties experienced ozone levels greater than the first stage alert level, supports the view that all counties in the region have a stake in reducing peak ozone levels.

Exposure to fine particulate matter (PM-10) is of critical importance because of the potential morbidity and mortality associated with this pollutant. PM-10 exposure was calculated in two ways for this assessment. First, because the only available PM-10 dose-response functions employ annual average ambient concentrations (as surrogates for actual exposure), distributions of annual average PM-10 exposures were calculated by multiplying the population times the annual average concentrations in each exposure district.

Second, in order to develop a more refined understanding of the PM-10 exposures, the REHEX model was applied using 24-hour average PM-10 data and factors to account for the modifying effects of indoor and in transit microenvironments. Results from the REHEX model indicate that virtually all residents of the SoCAB are exposed to one or more days per year with PM-10 concentrations in excess of the 50 $\mu g/m^3$ California 24-hour AQS. They also show that there are approximately 10 million exposures per year to concentrations in excess of the 150 $\mu g/m^3$ federal 24-hour AQS, and about 2 million and 200,000 exposures to concentrations exceeding 200 and 250 $\mu g/m^3$, respectively. The distributions of PM-10 exposures indicate residents of San Bernardino and Riverside Counties experience considerably more exposures per capita than residents of Los Angeles and Orange Counties.

### 1.3.2 Occurrence of Health Effects

Adverse health effects related to ozone occur more often than those associated with PM-10, but only the less severe can be quantified. Basin residents experience:

- More than 120 million days of cough,
- More than 190 million days of eye irritation,
- Nearly 180 million days of sore throat,
- Over 100 million days of headache, and
- Nearly 65 million days of chest discomfort as a result of failure to meet the Federal ozone AQS.
- Residents of Los Angeles County are near the basin average for symptom occurrence.
- Orange County residents are below the average.
- San Bernardino and Riverside Counties have occurrence rates above the basin average.

Among the more serious ozone related symptoms are minor restricted activity days (MRADs).

- Nearly 18 million MRADs occur each year because the SoCAB does not meet the Federal ozone AQS.

The most serious negative effects on health that are accounted for in this study are related to PM-10.

- It is estimated that there are 15 million restricted activity days (RADs) every year as a result of exposure to PM-10 levels above the Federal standards.

In addition to days when people feel ill enough to avoid normal activity, PM-10 is related to increased risk of premature death.

- For the average basin resident, the risk of death in any year is one in ten thousand greater than it would be if the Federal PM-10 standards were met.
- For people in San Bernardino and Riverside Counties, the risk is double the basin average.

To place these risks in context, the average risk in any year of dying in a motor vehicle accident in California is two in ten thousand.

### 1.4 Economic Benefits of Better Health

The best conservative estimate of the economic benefits of better health resulting from improved air quality is $9.4 billion to $14.3 billion. The larger value is related to meeting the tougher state standards. This dollar value includes the value of reducing symptoms due to ozone and PM-10 and PM-10-related risk of death, and of fewer MRADs and RADs. The contribution of each of these adverse effects on health to the total economic benefits of cleaner air is shown is Tables E-2 and E-3.

It is important to note that these estimates are based on a series of conservative assumptions in all elements of the analysis.

### 1.5 Conclusions

- Poor air quality is a fact of life in the South Coast Air Basin; no one is unaffected.
- Nearly every resident of the basin is exposed every year to at least one day when Federal ozone standards are violated.

- Over half of the entire population experiences a Stage I ozone alert, when school children are not allowed to play outdoors.

The severity and frequency of exposure to unsafe levels of pollution means that the SoCAB population has significantly poorer health than would otherwise be the case.

- Minor discomforts such as eye irritation are experienced on 16 days each year by the average basin resident.
- Every year each resident averages one day when normal activities are substantially restricted.
- The annual per capita risk of death is one in ten thousand greater than it would be if Federal standards were met.

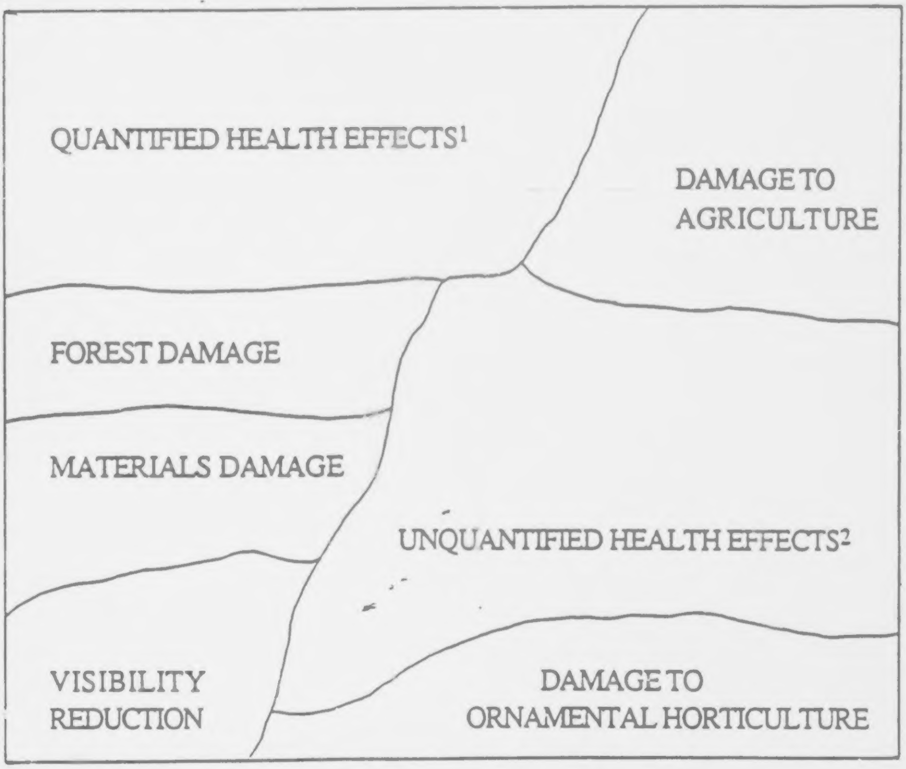
Although these numbers are large, they include only a limited measure of the overall cost to health. Effects of acidic compounds and other unregulated pollutants, long term ozone-related impacts, increased asthma attacks, days of hospitalization, and increased cancer risk, for example, are not included here. Moreover, none of the damage to plants and materials or the reduction in visibility is accounted for here.

The reduction of ozone and PM-10-related health impacts that we have been able to put into concrete measured terms has substantial economic benefits.

- $9.4 billion in annual benefits would result from attaining the Federal air quality standards. This is our best conservative estimate for the enumerated health effects.
- The value for attaining California's standards is $14.3 billion annually.

FIGURE E-1

CATEGORIES OF AIR POLLUTION DAMAGES
IN THE SOUTH COAST AIR BASIN


QUANTIFIED HEALTH EFFECTS[1]
DAMAGE TO AGRICULTURE
FOREST DAMAGE
MATERIALS DAMAGE
UNQUANTIFIED HEALTH EFFECTS[2]
VISIBILITY REDUCTION
DAMAGE TO ORNAMENTAL HORTICULTURE

1 PM-10 AND OZONE-RELATED SYMPTOMS, RADs, MRADs, AND MORTALITY.

2 LONG-TERM OZONE-RELATED EFFECTS, BRONCHITIS, ASTHMA, ANGINA, HOSPITAL ADMISSIONS, EMERGENCY ROOM VISITS AND ALL TOXICS-RELATED EFFECTS.

# TABLE E - 1

# ADVERSE HEALTH EFFECTS VALUED

## OZONE-RELATED:

- COUGH
- EYE IRRITATION
- THROAT IRRITATION
- HEADACHE
- CHEST TIGHTNESS
- MINOR RESTRICTED ACTIVITY DAYS (MRADs)
- MULTIPLE MINOR SYMPTOMS DAYS (MMSDs)

## PM-10-RELATED:

- RESTRICTED ACTIVITY DAYS (RADs)
- AVERTED DEATH

# TABLE E-2

## TOTAL ANNUAL DOLLAR BENEFITS OF ATTAINING THE FEDERAL PM-10 AND OZONE STANDARDS

## BASIN TOTAL ($BILLIONS)

| EFFECT | BEST CONSERVATIVE |
|---|---|
| RADS[1] | $ 1.0 |
| AVERTED MORTALITY[2] | $ 6.0 |
| SYMPTOMS[3] | $ 2.4 |
| TOTAL BENEFITS | $ 9.4 |

---

[1] Restricted activity days related to PM-10.

[2] Averted mortality related to PM-10.

[3] Minor restricted activity days, minor multiple symptoms days, and residual single symptom occurrences related to ozone.

# TABLE E-3

## TOTAL ANNUAL DOLLAR BENEFITS OF ATTAINING THE CALIFORNIA PM-10 AND OZONE STANDARDS

## BASIN TOTAL ($BILLIONS)

| EFFECT | BEST CONSERVATIVE |
|---|---|
| RADS[1] | $ 1.6 |
| AVERTED MORTALITY[2] | $ 10.1 |
| SYMPTOMS[3] | $ 2.6 |
| TOTAL BENEFITS | $ 14.3 |

---

[1] Restricted activity days related to PM-10.

[2] Averted mortality related to PM-10.

[3] Minor restricted activity days, minor multiple symptoms days, and residual single symptom occurrences related to ozone.

## TABLE E - 4

## GENERATION OF FINAL DOLLAR VALUES -- OZONE

| CATEGORY | HEALTH EFFECT | ECONOMIC VALUE |
|---|---|---|
| MINOR RESTRICTED ACTIVITY DAYS (MRADs) | EPIDEMIOLOGICAL STUDY<br>(PORTNEY & MULLAHY, 1986) | WILLINGNESS TO PAY--CV<br>(KRUPNICK & KOPP, 1988)<br>(TOLLEY ET AL., 1986)<br>(LOEHMAN ET AL., 1979) |
| INDIVIDUAL SYMPTOMS<br>COUGH<br>SORE THROAT<br>HEADACHE<br>CHEST TIGHTNESS<br>EYE IRRITATION | CLINICAL RESEARCH<br>(AVOL, 1987)<br>(KULLE ET AL., 1985)<br>(McDONNEL ET AL., 1983)<br>EPIDEMIOLOGICAL STUDY<br>(IMAI, 1975) | WILLINGNESS TO PAY--CV, AVERTING BEHAVIOR<br>(DICKIE ET AL., 1987)<br>(TOLLEY ET AL., 1986)<br>(ROWE & CHESTNUT, 1984)<br>(LOEHMAN ET AL., 1979) |

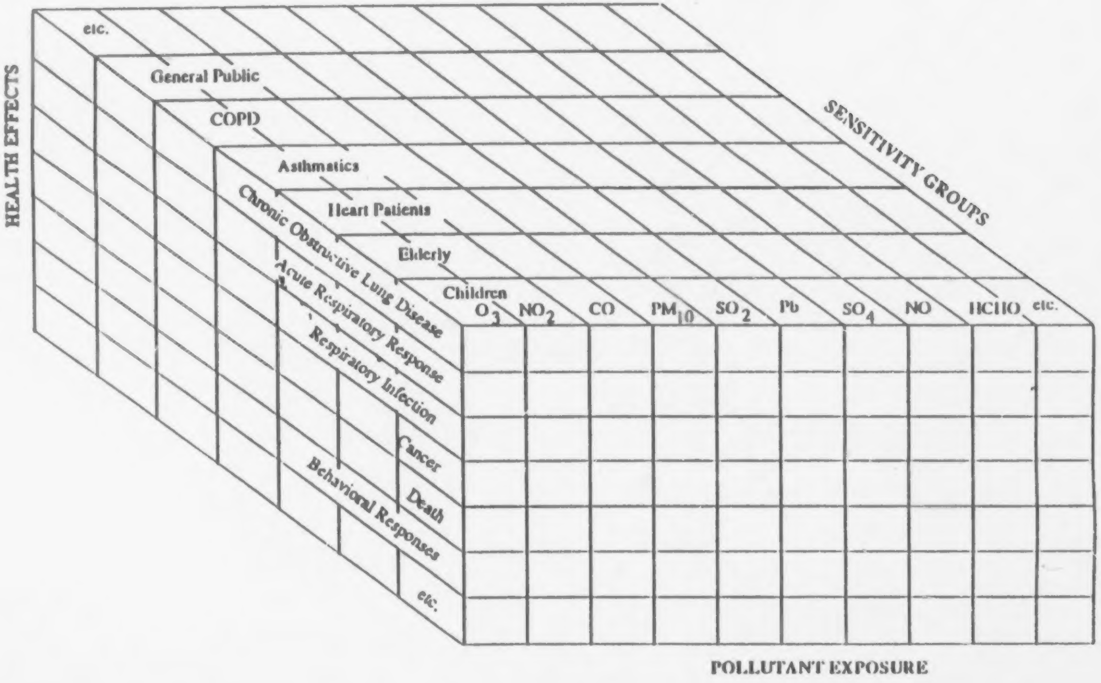
## TABLE E - 5

## GENERATION OF FINAL DOLLAR VALUES -- PM-10

| CATEGORY | HEALTH EFFECT | ECONOMIC VALUE |
|---|---|---|
| MORBIDITY (RADs) | EPIDEMIOLOGICAL STUDY (OSTRO, 1987) | COI (FOREGONE WAGES)<br>AREA WAGE SURVEY<br>ECS REPORTS<br>EMPLOYMENT AND EARNINGS |
| MORTALITY (LOWER RISK OF DEATH) | EPIDEMIOLOGICAL STUDY (EVANS ET AL., 1984) | WTP, WTA<br>(FISHER ET AL., 1988)<br>(VISCUSI, 1986)<br>(MOORE & VISCUSI, 1988)<br>(LEIGH & FOLSOM, 1984)<br>(GAREN, 1988)<br>(KAHN, 1986) |

Figure E-2

Idealized matrix of health responses of sensitive population groups to criteria and non-criteria pollutant exposures.


HEALTH EFFECTS
etc.
General Public
COPD
Asthmatics
Heart Patients
Elderly
Children
SENSITIVITY GROUPS
Chronic Obstructive Lung Disease
Acute Respiratory Response
Respiratory Infection
Cancer
Death
Behavioral Responses
etc.
$O_3$
$NO_2$
CO
$PM_{10}$
$SO_2$
Pb
$SO_4$
NO
HCHO
etc.
POLLUTANT EXPOSURE

# STATEMENT OF
# DWAINE H. SMITH
ON BEHALF OF THE
CLEAN AIR WORKING GROUP (CAWG)

BEFORE THE
SUBCOMMITTEE ON ENVIRONMENTAL PROTECTION
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE
ON
S. 1630
CLEAN AIR RESTORATION AND STANDARDS ATTAINMENT ACT OF 1989

WASHINGTON, D.C.
September 27, 1989

## TABLE OF CONTENTS

INTRODUCTION 1

ADVANCE PLANNING PROGRAM (APP) 2

SPECIFIC ISSUES CONCERNING OZONE NONATTAINMENT 9
- Scientific and Technical Determinations 9
- Classification of Nonattainment Areas (NAAs) 11
  - Basic Concept of Classification 12
  - Specific Classification Levels and Deadlines 13
  - Boundaries of NAAs 14
  - Redesignation of an Area to "Attainment" Status 14
  - Reliance on "Design Value" 15
- Inventories 17
- Mandatory Annual Reductions in VOC Emissions 18
- Control Technologies 21
  - RACT and Existing Plans 21
  - Development of Additional CTGs 22
  - Additional RACT Requirements 22
- Operating Permits 24
- Offsets 25
- Oxides of Nitrogen (NOx) 26
- Automobile Inspection and Maintenance (I&M) and Transportation Control Measures (TCMs) 28
- Motor Vehicle Refueling 29
- Fuel Volatility 30
- Fuel Quality 31
- Ozone Transport 31
- Emissions Fees 32
- Sanctions 33
- Consumer and Commercial Products 34
- Outer Continental Shelf (OCS) Emissions 35
- Marine Vessels 37

PARTICULATE MATTER (PM 10) NONATTAINMENT AREAS 38

CARBON MONOXIDE 42

CONCLUSION 44

Good morning, Mr. Chairman. My name is Dwaine H. Smith and I am Senior Vice President of Manufacturing for the ARCO Products Company. I am here today on behalf of the Clean Air Working Group (CAWG), a national coalition of industries, businesses and trade associations working to help develop an effective and reasonable clean air policy for the United States.

My presentation today will focus on S. 1630, with occasional references to the Administration bill, which was introduced as S. 1490. Most of my comments are directed at the issue that is the central focus of S. 1630, attainment of the ozone standard. In addition to ozone, S. 1630 deals with the problems of nonattainment of the standard for carbon monoxide (CO) and nonattainment of the PM 10 standard as well. With respect to PM 10, we believe that specific legislative requirements are premature, and the penultimate section of this statement explains the basis of this view. With respect to Carbon Monoxide, CAWG favors a system that allows all oxygenated fuels to compete in the marketplace. The final section of this statement analyzes S. 1630 in terms of this criterion.

## ADVANCE PLANNING PROGRAM (APP)

My first point concerns something not recognized in S. 1630: The importance of instituting an Advance Planning Program (APP) to improve the capacity for making choices on clean air at all levels of government.

In 1970, the nation made a major commitment to controlling air pollution. CAWG supports this effort and wishes to reemphasize its own commitment to continued progress. In response to that national mandate, industries of all kinds have modified their products and have installed extensive controls on hydrocarbons and other emissions to meet the ozone and other ambient air quality standards. In many areas of the country, these measures have helped reduce both average ozone levels and the number of hours during which the ozone levels exceed the standard.

The nation as a whole is spending at least $35 billion annually on air pollution control. Yet, our attainment goals still have not been achieved. To say the least, the situation is frustrating to the Congress, the public, the Environmental Protection Agency, industry, and the environmentalist community. While many obvious solutions have been put into place, the current state of technology and science leaves few, if any, options that are economically efficient or socially painless. This means that the next round of choices will be difficult and must be made carefully.

It is particularly important to recognize that choices should not rely too heavily on the data for ozone nonattainment in 1988. Because of its unusually hot weather, 1988 was a highly unusual year for ozone exceedances. In 1989, the 12 "worst" cities (excluding Los Angeles) experienced 80 percent fewer exceedances than in 1988. For some areas the drop was as high as 95 percent. While CAWG would not argue that there is no ozone problem, basing legislation on 1988 data would result in a severe overreaction.

The drive to reach attainment is leading to regulatory efforts that may not be in the nation's long-term interests, given both the history of nonattainment, the importance of weather, and the complexities of ozone formation. For example, it is easy to assume that reductions in hydrocarbon emissions will automatically bring about corresponding reductions in ozone levels. This is often not true. Other factors, such as natural background ozone levels, weather patterns, transport of pollutants, and ratios between VOCs and NOx can affect ozone levels. Many localities have imposed extensive and costly control requirements only to find, now, that they must go back to the drawing board and seek even more costly further controls.

Problems are further exacerbated by incomplete knowledge of both emissions sources and the impact and interaction of the different sources. All too often, states are forced to rely on over-simplified air quality models and incomplete data as a basis for developing emission control strategies. For example, the recently-completed tunnel component of the South Coast Air Quality Study (SCAQS) raises a strong possibility that the best existing models of automobile emissions in California are in error by a factor of two or more for hydrocarbons. Another example is the recently-issued MOBILE 4 emissions model, which includes a running loss emissions factor that is based on very questionable preliminary data. Despite the lack of scientific reliability, these imperfect tools have been the basis for the majority of control requirements imposed on industry and the public.

In spite of these problems, under S. 1630 localities would be placed under great pressure to start imposing costly new control measures starting immediately after passage of a law. While the bill would provide some steps to promote better inventories, monitoring data, and development of emissions factors for small sources, it would also set short deadlines for development of SIP revisions, establish inflexible targets for emissions reductions and imposition of technological requirements, and threaten early sanctions for failures of planning, implementation, or execution.

Furthermore, many requirements are also simply assumed to be necessary and effective when in fact there is substantial reason to think they are neither. For example, it is far from clear that reductions in VOC emissions translate directly into reductions in ozone levels or that NOx reductions on the scale required are cost-effective or even helpful.

CAWG urges that the nation take the time needed -- two or three years -- to assess the problems, obtain better information, improve modeling, and more thoroughly analyze both the problems and the possible solutions. Congress should require a two- to three-year Advance Planning Program (APP) that provides a solid basis for selecting the most efficient and cost-effective control strategies for each nonattainment area (NAA) by:

- Developing better criteria for defining and assessing when an area is in "nonattainment," criteria that relate emissions and ozone formation to human exposures.
- Improving accuracy of inventories of both man-made and natural emissions on a time schedule that permits the improved versions to influence control strategies and plans.
- Creating a monitoring system that accurately defines the scope and characteristics of the problem that we are trying to fix.
- Examining existing SIPs to identify what controls have and have not worked, and why, and to rank the cost-effectiveness of available control options.
- Improving air quality modeling techniques.
- Analyzing the relationship between VOC and NOx reductions in projecting improvements in air quality.
- Establishing realistic categories of nonattainment areas.

The APP would accomplish several important objectives. It would:

- Promote development of a comprehensive data base that would identify the amounts and sources of emissions and other information needed to assess air quality and determine appropriate control options.

- Highlight the degree of uncertainty of all estimates of the effect of control measures on future emissions and the difficulties involved in basing decisions of great consequence on questionable foundations.
- Develop procedures that would accurately measure progress in improving air quality.
- Array available control measures according to their relative cost-effectiveness.
- Evaluate the benefits of control options against costs and thus help to determine which controls would give the nation the most for its money.
- Lead to the development of realistic deadlines and eventual attainment.

The argument is sometimes made that ozone nonattainment is too severe and pervasive to wait (*i.e.*, that it is a "crisis"), and that immediate action is necessary. Accepting this argument creates a situation in which we are always too pressured by deadlines to think the problem through. Consequently, mandates are constantly imposed (and modified), deadlines set (and missed), and expensive measures adopted which later turn out to be of dubious value. Ironically, the real progress made by NAAs and the serious efforts by industry are often ignored. Analysis of EPA's trend reports, for example, shows that population exposures are decreasing.

CAWG is not suggesting that VOC controls be put on hold during the implementation of the APP. Existing control strategies for VOCs and NOx emissions will continue to be implemented. For example, EPA is currently calling in the SIPs for all NAAs. All states with NAAs will be required to upgrade their inventories as well as to implement the provisions in their SIPs. EPA has just begun a negotiated rulemaking on fugitive benzene emissions from industrial processes, which EPA plans to use as a template for proceedings on other types of VOC emissions. Air quality improvements will continue as these and other strategies are implemented.

On balance, though, the institution of a strong APP process is indispensable to the development of a valid long-term strategy on clean air. A familiar adage is appropriate here. It says that if you think you cannot take the time to do something right, you will find out that you have to take the time to do it over. CAWG believes that the time spent developing the APP will return high dividends by eliminating the need for the nation to keep revisiting the basic issues involved.

We believe that our point is borne out by recent experience in California. San Francisco, unlike other NAAs, did not use basic EPA guidance in preparing its SIP. Instead, the area performed a detailed inquiry into emissions sources and patterns, and developed a plan from a better information base than that used by any other NAA. The result was clearly superior. San Francisco's plan led to more accurate predictions, a more rational program that outperformed any other area in making progress towards achieving attainment.

## SPECIFIC ISSUES CONCERNING OZONE NONATTAINMENT AREAS

### Scientific and Technical Determinations

Numerous regulatory requirements under S. 1630 will depend heavily on technical and scientific determinations. The list includes topics as diverse as the effectiveness of emission control technologies, air pollution modeling, emissions factors for stationary sources, alternatives to the use of the Design Value as a criterion of ozone air quality, the efficacy of proposed control technologies, and risk assessment methodologies.

The legislation does not establish any system for making these determinations that will reassure interested publics that they are made in an unbiased manner. The lack of such a system creates several serious problems:

- There is no guarantee that EPA will base its decisions on the best available technical and scientific expertise.
- Important research by industry can be ignored or rejected without explanation.
- EPA is left vulnerable to intense pressure to make technical and scientific decisions on non-scientific grounds, and to public impressions that technical and scientific decisions are made on non-scientific grounds even when this is not the case.

CAWG recommends that a process be established to guarantee the scientific soundness of scientific and technical determinations. S. 1630 should require that EPA, in consultation with the President's Science Advisor, the National Academy of Sciences, and the National Research Council, establish a board to review the technical and scientific data, analyses and assumptions upon which regulatory determinations rely.

In addition, provisions need to be added to strengthen public input into technical and scientific decisions. In particular, EPA should acknowledge and respond to technical input made at public workshops.

**Classification of Nonattainment Areas (NAAs)**

S. 1630 divides NAAs into four classes, based on differences in Design Value, with different deadlines and requirements for each. These requirements become more stringent as the severity of the problem escalates. The four classes, together with the Design Value delimiting them under the current ozone standards of 0.12 ppm and the deadline for attainment, are:

- Moderate, if the standard is exceeded by no more than 20 percent (0.14 ppm) (Deadline: 5 years).
- Serious, if the standard is exceeded by between 20 and 50 percent (0.15 ppm to 0.18 ppm) (Deadline: 10 years).
- Severe, if the standard is exceeded by between 50 and 120 percent (0.19 ppm to 0.26 ppm) (Deadline: 15 years).
- Extreme, if the standard is exceeded by more than 120 percent (over 0.26 ppm) (Deadline: 20 years).

If an NAA is within a Standard Metropolitan Statistical Area (SMSA) or a Consolidated Metropolitan Statistical Area (CMSA), then the entire SMSA or CMSA is to be classified as non-attainment. For an Extreme area, the non-attainment classification is to extend for a 25-mile radius beyond the SMSA or CMSA.

CAWG has comments on a number of aspects of this classification system.

Basic Concept of Classification

Designating four categories of nonattainment is a great improvement over a system that recognizes nothing but attainment versus nonattainment. However, making the categorizations inflexible and imposing rigid federal requirements within each category is inherently arbitrary. The system needs to be more responsive to the particularities of local conditions. S. 1490 would allow EPA to change an NAA's classification if it is within 5 percent either way of the boundary line. This introduces a desirable element of flexibility, and should be expanded upon in any bill, though the margin of flexibility should be at least 10 percent. Any rigid number will cause constant changes based more on the weather than on the area's efforts. This will throw planning into turmoil. In general, classifications should be flexible, should take local conditions into account, and should be based on the Advance Planning Program. The logical way to achieve these goals is to have legislation establish the general criteria for any classification system, but allow EPA to adjust them through the rulemaking process.

Specific Classification Levels and Deadlines

The demarcation lines between categories in S. 1630 are considerably more realistic than those in S. 1490, which would apply its most stringent deadlines and requirements to areas with Design Values over 0.19 ppm and its next most stringent to those over 0.16 ppm. S. 1630 gives Los Angeles its own category, which is appropriate. The problems of Los Angeles are unique, and legislation would recognize this. The deadlines in S. 1630 are also greatly preferable to those in S. 1490, which would call for attainment by 1995 in its two lowest classes, by 2000 in its third-lowest, and by 2010 for its most severe.

CAWG supports classification of nonattainment areas, but classifications should be expressed in terms of specific numerical values, not as a percentage of the ozone standard. This provides much more certainty to states and localities. Were the ozone standard to change, then the issue could be revisited. There is no *a priori* reason to think that provisions reasonable under the current standard would remain reasonable if the standard were either higher or lower.

### Boundaries of NAAs

The provision that the NAA boundaries are to be expanded to cover the entire SMSA or CMSA will force imposition of many measures on an area that do not contribute to attainment. Boundaries of an NAA should not be expanded arbitrarily. Extensions of control areas should be based on what is necessary to deal with the problem, and should be determined by improved modeling.

### Redesignation of an Area to "Attainment" Status

The bill says that an area can be redesignated as "attainment" only if it attains the standard and if all measures in the SIP have been implemented. It also requires 20-year plans for the maintenance of attainment status.

This raises two issues.

- First, under EPA's approach to defining non-attainment, an unusually hot summer which produced four exceedances would prolong non-attainment status for three more years. This could trigger sanctions despite the fact that no further efforts were actually needed to meet the standard during normal times. A modification in the definition of attainment is necessary to avoid this problem.

- Second, the bill requires implementation of all plan measures even if some of them turn out to be unnecessary. This is unwise policy, since it creates an incentive for states to trim their plans as close to the edge as possible so as to avoid imposing excessive requirements. If the standard is attained, the state should be able to modify its plan except as necessary for maintenance.

Reliance on "Design Value"

S. 1630 specifically adopts the use of present ozone monitoring data and the present EPA approach to using the "Design Value" to define nonattainment. The bill would actually increase the impact of these techniques by using them as the basis for classifying NAAs according to degree of severity of the problem.

In CAWG's view, there are severe problems with EPA's approach to monitoring and use of the Design Value, and, consequently, with any classification scheme that uses them as a basis.

Every air quality area engages in ozone monitoring, though there is no specified number of monitors. There can be as few as one (e.g., Portsmouth, NH) or as many as 43 (e.g., the Los Angeles area). EPA's general guidance is to place these monitors in areas where high ozone levels are likely to be found. Each locality collects hourly readings from the monitors. If, over a period of three years, four readings from any monitor are in exceedance of the standard, then the entire area is out of attainment. The fourth highest reading above the standard -- the one that tips the area into nonattainment -- is called the "Design Value," and is the figure toward which efforts to reach attainment are targeted. This Design Value is frequently cited with an implication that it represents some measure of average air quality for the entire air region. In fact, it is computed from the highest measurements from any monitor in an entire area.

The Design Value is not likely to be representative of overall air quality. It ignores other important considerations, such as the number of times per year the ozone standard is exceeded and how great the exceedances are. It places no weight on the duration of exceedances. It does not recognize that different conditions may prevail in different parts of an NAA, and that monitors are usually sited to identify the worst levels, not the average.

Given these problems with the Design Value, S. 1630, and any other scheme relying on it, makes decisions of overwhelming social and economic importance rest on a deeply flawed concept. The whole Design Value approach needs reform, and until this is accomplished the number should be given greatly diminished importance.

**Inventories**

Under S. 1630, sources of VOC and NOx emissions must provide statements of actual emission for the state to use in developing an inventory. EPA is to issue guidelines on emissions factors, and the state may waive the requirement of a statement of actual emissions for sources of less than 25 TPY if the state provides an inventory based on EPA's guidance. For NAAs classified as Serious, Severe, or Extreme, the inventory is to include all sources within a 25-mile radius of the NAA.

CAWG strongly endorses improvements in emissions inventories as an essential part of the planning process. It agrees that inventories should cover all sources. However, it also believes that more flexibility is needed than would be allowed by S. 1630. In particular, mandating actual emissions statements may not always be the best approach. In some cases, more accurate estimates might be developed by analyzing a few sources in depth and extrapolating the results to a broader category. In other cases, the costs of obtaining emissions statements from everyone may be prohibitive. States should have authority to use sampling techniques or emissions factors where necessary. Allowing the use of emissions factors for sources of less than 25 tons is a desirable first step, but it should not be limited to small sources. In some areas the state should be able to apply these techniques to larger sources as well.

The bill also says that if EPA fails to issue guidance on emissions factors, then states must require actual emissions statements. This should be eliminated. States and businesses should not be punished for any EPA failure to meet deadlines.

The inclusion of all sources within a 25-mile radius also seems extreme. There should be a reasonable basis to conclude that sources outside the NAA are affecting an NAA's problem before inclusion is mandated.

### Mandatory Annual Reductions in VOC Emissions

CAWG opposes the principle of mandated specific annual reductions. Such requirements tend to force a state to look to large stationary sources, which can be subjected immediately to specific technological requirements, instead of to other sources for which the lead time might be longer. This not only distorts the choice between short-term and long-term measures, it also has a significant "leverage" effect. If stationary source emissions reduction is the only course open to a state within the time limits, then even a modest percentage reduction in total VOCs from all sources requires a very high percentage reduction in stationary source emissions.

For Serious, Severe and Extreme NAAs, S. 1630 would establish a system of emissions reduction milestones based on the principle that emissions should be reduced in approximately equal increments. It would require reductions of 12 percent every three years until attainment. All emissions reductions would count toward the goal except those achieved as a result of mandated reductions in the volatility of gasoline.

These provisions have some desirable aspects. By averaging the reduction requirements over a period of three years, they allow states some flexibility to impose requirements that have a long-term payoff. S. 1630 is also preferable to the comparable provisions in S. 1490 in that it gives credit for all emissions reductions except those resulting from decreases in the volatility of gasoline.

S. 1490 would exclude emissions attained as a result of reductions in gasoline volatility, application of RACT, vehicle I & M, and motor vehicle evaporative and tailpipe standards. On the other hand, S. 1630 would require an average reduction of 4 percent per year, as opposed to 3 percent under S. 1490, and would require the averages to be attained over 3-year periods as opposed to 5-year periods under S. 1490.

CAWG believes that any system of mandatory reductions should give credit for all emissions reductions, including those derived from decreases in the volatility of gasoline. It also believes that any such requirement should be set at a low annual level, and should be averaged over the longest possible period of time.

Even without the special impact on stationary sources, however, mandatory annual reductions are a poor policy. The need for immediate pay-offs distorts the choices. In addition, the state of measurement and monitoring is such that annualized reduction requirements can trigger serious sanctions on the basis of highly imperfect and variable measurements.

This is another example of an area in which careful analysis and planning are needed in place of arbitrary hammers. Whether a SIP is in fact putting an area on the road to attainment or is an effort to stave off difficult choices is something best judged according to the circumstances of each specific NAA. The state, acting on information derived from the inventories and the planning process, is in the best position to judge where reductions in emissions should be made. Reducing the number of choices available to a state by imposing arbitrary milestone requirements will make ultimate success less likely. Certainly, it may be desirable to establish benchmarks for assessing progress, but it makes more sense for EPA to look directly at measures of air quality, as we suggest in the section on the Advanced Planning concept.

## Control Technologies

S. 1630 has three different sets of provisions governing application of Reasonably Available Control Technology (RACT) and the development of Control Guidance Technique (CTG) documents.

### RACT and Existing Plans

All existing SIPs are to be amended to require installation of RACT on all sources for which CTGs have been issued by EPA. RACT would also be required for all sources within a state that is part of an ozone transport region, even if the source is not within an NAA.

Such a provision makes insufficient allowance for the flexibility needed to meet local conditions. While, clearly, only RACT embodied in CTGs should be required, RACT should not be imposed on any source unless the APP demonstrates that the contribution to solution of the ozone problem will be both real and necessary. (This is particularly important in non-self-generating rural areas.) A state should be able to demonstrate the inapplicability of a CTG through a simple, quick process.

Development of Additional CTGs

S. 1630 requires EPA to issue CTGs for 12 additional categories of stationary sources during the next 48 months.

CAWG supports the continuing orderly development of emissions control guidance by the Agency. It is essential that public participation be a part of the development process, though, and CTGs should only be adopted through the normal rulemaking process that solicits public comment. The law should be changed to reflect this principle.

Additional RACT Requirements

S. 1630 contains one very serious additional RACT mandate applicable to Serious, Severe, and Extreme NAAs. SIPs must require RACT for all VOC sources of more than 25 TPY and all NOx sources of more than 100 TPY that are not covered by CTGs. The technology is to be implemented within two years, and is to provide for reductions of at least 80 percent unless the state finds that this is not technologically or economically feasible, in which case the reduction shall be the amount feasible.

The major objections are to this proposal are:

- The concept of "feasibility" is both poorly defined and inconsistent with the concept of "RACT," which is based on a practical concept of technology and economics. Consequently, the import of the provision is completely unclear. The only certainty is that it would lead to confusion, delay, and obfuscation.
- By divorcing the RACT requirement from CTGs, the bill would remove all consistency and predictability. It would also make coordination of technological requirements more difficult and consistency less likely.

- The requirement of an 80 percent reduction has no technical basis. Furthermore, imposing a common reduction requirement on all sources, regardless of incremental costs of control, is certain to lead to gross economic inefficiencies.
- RACT requirements should not be imposed on sources of NOx, for the reasons discussed more fully later in this statement.

In essence, this provision uses the guise of the familiar concept of RACT to impose an entirely new standard of undefined meaning. It should be eliminated.

**Operating Permits**

S. 1630 requires existing major sources to obtain operating permits ensuring that they are in compliance with applicable emissions limits. An on-site inspection would have to take place before the permit could be granted, and an opportunity provided for a public hearing on the conditions to be included in the permit. A permit could not issue if EPA objected. Quarterly reports would be required.

It is important that major sources meet emissions limitations, but the specific requirements of the bill would create incredible delay and hardship. The requirement of on-site inspection could by itself result in massive shutdowns of industrial facilities if an area was short of inspectors. The requirement of a public hearing on every permit could have similar effects. Quarterly reporting is excessively frequent.

The states should have authority to determine whether operating permits for existing facilities should be required, and, if so, what conditions are reasonable and appropriate. A system that imposes standards on the regulated community and checks up when there is some reason to believe that self-policing is not working is far preferable to an burdensome permit system.

**Offsets**

For new and modified major sources of VOC emissions, S. 1630 would require offsets of 1.5 to 1.0 in Serious areas and of 2.0 to 1.0 in Severe and Extreme areas.

The principle of requiring offsets is sound. They are necessary to ensure that NAAs are not subject to continuing deterioration from an accumulation of small increments of new emissions.

Requiring offsets higher than 1.0/1.0 does not necessarily carry out this policy, though. Stringent offset requirements can adversely affect modernization and upgrading of existing facilities, as well as new construction. They are often tantamount to a prohibition on all modifications and new construction. Offset provisions have been in effect for some years now, and offsets are extremely difficult, if not impossible, to find on the scale that would be required by S. 1630.

As a general proposition, legislation should not preempt state decisions on offsets, particularly for industries that are already subject to control requirements. At the most, offset requirements even in the most serious NAAs should be "netting out" for inside the facility and 1.2/1.0 for outside.

**Oxides of Nitrogen (NOx)**

To some extent, S. 1630 treats NOx emissions as if they were the equivalent of VOC emissions, subjecting sources to equivalent provisions concerning inventories and emissions fees. The bill would also require RACT on sources of over 100 TPY of NOx emissions in some NAAs. In other respects, the bill appears to recognize the important distinctions between VOC and NOx emissions. There are no mandates for percentage NOx emission reductions for example.

CAWG would like to emphasize the importance of recognizing that NOx and VOCs do not have equivalent effects, and that giving EPA and the states flexibility in dealing with NOx is particularly vital. RACT should not be mandated for any sources.

Ozone production depends on the ratio of VOCs to NOx, as well as on the weather, and it is entirely possible for reductions in NOx emissions to cause an increase rather than a decrease in ozone formation. In general, the extent, and even the existence, of any positive impact of NOx controls on air quality is highly uncertain.

Nor is it easy to develop better answers immediately. The old approach under the Empirical Kinetic Modeling Approach (EKMA) uses an average VOC/NOx ratio as modeling input for an entire area, an assumption that is unlikely to be accurate for a complex modeling analysis. In addition, serious discrepancies exist between NOx estimates derived from inventories and those based on ambient measurements. Photochemical grid models, such as the Urban Airshed Model (UAM), address these problems, but are not yet in general use.

Control requirements developed with a view toward the relative contributions of the different types of sources of VOC emissions are not necessarily appropriate for NOx sources.

They would be unlikely to reflect the relative cost/effectiveness of options for reducing NOx emissions.

Given that NOx controls may actually raise ozone levels, precipitous action in this area is particularly inappropriate. No new NOx requirements should be imposed pending:

- Assessment of the impact of NOx reductions on ozone formation.
- Development of the Urban Airshed Model and the Regional Oxidant Model and the expertise to use them.
- Resolution of discrepancies between NOx and VOC ambient measurements and inventory estimates.
- Improvement in the estimates of NOx sources and levels.

If some provision for NOx controls seems desirable, then legislation should allow the state to act only if it finds affirmatively, on the basis of appropriate air modeling studies, that such controls will produce positive air quality benefits. The APP is particularly important to the development of sound policy on NOx.

**Automobile Inspection and Maintenance (I&M) and Transportation Control Measures (TCMs)**

S. 1630 contains several provisions recognizing the close relationship between automobile use patterns and ozone nonattainment. All NAAs are given a choice between an enhanced I&M program or imposition of Stage II vapor recovery controls on refueling, even though Stage II controls have been shown to be a cost-ineffective control alternative. Severe and Extreme NAAs must adopt TCMs or specifically explain their failure to do so.

CAWG endorses this emphasis on the role of I&M and TCMs. It is important to recognize that new automobiles have very low emissions levels. I&M is an essential method of addressing the pollution caused by the existing fleet, especially older cars.

CAWG suggests, however, that attention to automobile use issues should be extended still further. For example, TCMs might be an alternative in Moderate and Serious NAAs, not just in the worst two classes.

CAWG opposes the provision that makes I&M and Stage II alternatives. The two systems are not alternative approaches to controlling a particular category of emissions.

**Motor Vehicle Refueling Emissions**

As noted previously, S. 1630 would let states choose between an enhanced vehicle I&M program and imposition of Stage II vapor recovery on automobile refueling.

CAWG recommends against this approach. Stage II is not an alternative way to control the emissions that could be controlled by I&M. It should be treated like any other control technology and judged in terms of its cost-effectiveness as compared with the entire range of emissions reduction options available to the state. When this is done, it becomes obvious that Stage II is an unnecessary control technology that fails any reasonable criterion of cost-effectiveness.

**Fuel Volatility**

S. 1630 places limits on the volatility of motor fuel that would force reductions in Reid Vapor Pressure (RVP) to less than 9 psi in many parts of the country during the summer months.

CAWG supports RVP reductions to no less than 9 psi in all parts of the country, if appropriate time for compliance is allowed. The requirement should not take effect before 1992 to allow refiners time to make necessary modifications. RVP reductions below 9 psi could cause drivability problems and are not a cost-effective means of attaining VOC emission reductions.

**Fuel Quality**

EPA already has authority to establish fuel specifications under section 211 of the Clean Air Act. CAWG strongly opposes the provision on fuel quality specifications. As proposed, the provisions appear unworkable. For example, there is no accepted definition of "fuel impurities" and no technically acceptable means for comparing the effectiveness of various fuel additives. Additives are highly proprietary in the fuels industry and should not be the subject of federal rules.

Other provisions in this section give EPA broad new authority to issue regulations applicable to "refiners, distributors, marketers, or consumers" in establishing fuel specifications. We see no reason to supply such additional blanket authority to the Agency.

**Ozone Transport**

S. 1630 provides for creation of ozone transport regions and ozone transport commissions.

Ozone transport is a crucial issue. CAWG recommends that the effort to inventory and model go forward as part of the APP, and that requirements for ozone transport regions be based on the results of that effort.

**Emissions Fees**

S. 1630 contains several provisions levying fees on sources of emissions. Each automobile in an NAA is subject to a fee of at least $2.00. Major stationary sources of VOCs are to pay annual fees of $25 per ton of VOC and NOx emitted in Moderate areas, $100 per ton in Serious areas, $250 per ton in Severe areas, and $500 per ton in Extreme areas. In Serious and Severe areas, if emission reductions targets are not met, then the fees go to $500 per ton. The proceeds of these programs are to be spent on air pollution programs.

CAWG opposes any requirement of emissions fees imposed at the federal level. While we recognize that programs must be funded, states already have the authority to impose fees, and, in fact, some state programs are already funded by fee systems.

If fees are imposed, they should be levied on an equitable basis. The specific provisions of S. 1630 put virtually all of the burden on large stationary sources. The penalty provisions, increasing the fees if the state does not meet its targets, also penalizes these sources for failures not of their making.

**Sanctions**

S. 1630 relies primarily on the sanctions of bans on construction of major sources and of withholding of grants for transportation projects unless these would promote improvements in air quality. These sanctions are mandatory if an NAA fails to submit or implement a plan or fails to meet required emission reductions. If an NAA fails to meet emissions reduction requirements, EPA is to perform an audit to determine the reason and to be sure the plan is being enforced. EPA can also take such steps as redefining "major source" or imposing requirements associated with the next highest NAA classification. The penalty for failure to attain is reclassification.

In addition, special penalties are imposed on stationary sources if the NAA fails to meet its obligations. In Serious and Severe areas, the fee for emissions goes to $500 per ton if interim emission reduction targets are not met. And if the attainment deadline is not met, then a fee of $5000 per ton of VOCs emitted in excess of 50 percent of the amount emitted in the year attainment was supposed to occur is to be levied on major stationary sources.

CAWG believes that the following principles should apply to sanctions:

- Sanctions policy should be developed in the context of a solid program of advanced planning.
- Growth-limiting sanctions unfairly single out stationary sources when many problems are due to mobile sources. In addition, they discourage the replacement of older, less-efficient installations with new, cleaner ones.
- Sanctions on individual sources should be imposed only for willful non-compliance, not for generalized failure by the state.

Two sanctions provisions -- the increase in emissions fees to $500 per ton and the $5000 per ton penalty -- both of which apply only to major stationary sources, are particularly unfair. Individual sources, which may themselves be in full compliance, should not be penalized for failures by the state or by other sources.

**Consumer and Commercial Products**

Under S. 1630, EPA is to study emissions of ozone precursors from consumer products, and is to issue regulations governing consumer and commercial products. The goal is to reduce emissions from selected categories to the level that would be achieved by RACT, and to achieve nationwide VOC emissions reductions of at least 3 percent. The Agency has wide power to prohibit, limit or control manufacture, processing, consumption, use or disposal. Fees may be imposed.

Obviously, an analysis of the impact of VOC emissions from consumer and commercial products would be a salutary step and a logical part of the Advance Planning Program recommended by CAWG. The legislation should not go further, though, because without the information that will be developed by the study it is impossible to judge what steps might be worthwhile. There is no justification for giving the Administrator such broad discretion over every portion of the U.S. economy and society. It is particularly unwise to set a target of 3 percent reductions in emissions without any information concerning the feasibility or consequences of such a provision.

## Outer Continental Shelf (OCS) Activities

S. 1630 would require EPA to control emissions from Outer Continental Shelf (OCS) activities in the same manner as if the sources were located in the adjacent onshore area. (This would displace the existing authority of the Minerals Management Service (MMS).) A state adjacent to the source may take over the implementation and enforcement of these requirements if EPA finds the state plan adequate.

This provision has several defects:

- The present rules of the MMS are fully protective of air quality. There is no reason to transfer authority.
- There is no evidence that OCS facilities have significantly or detrimentally impacted onshore air quality.
- The provision would effectively subordinate the federal OCS exploration and development program to local control, regardless of how such regulation would affect the interplay between onshore air quality and the exploration and development of offshore energy, and regardless of whether the OCS activities have any impact on onshore air quality.
- It ignores differences among states. Even though the bill appears to be aimed at California, it will clearly apply to the Gulf of Mexico and other OCS area operations as well. While most of California's activities on the OCS occur in the three- to ten-mile range, in the Gulf of Mexico activities take place up to and beyond 200 miles from shore. Further, California has perhaps 15

installations offshore, whereas in the Gulf there could be up to 4,000. The point is that there are vast differences between the various OCS areas throughout the country, both in terms of meteorology and activities, and these should be taken into account. S. 1630 does not do so.

**Marine Vessels**

S. 1630 requires, within 2 years, issuance of a Control Technology Guidance (CTG) document for loading and unloading petroleum products onto or from marine vessels. Emissions from these activities are to be considered as direct emissions from the onshore terminal.

Marine vessels engage in interstate commerce. Some vessels frequent as many as ten or more different jurisdictions that may be in nonattainment of federal air quality standards. This makes control of emissions from marine vessels into a hybrid problem -- it does not lend itself to any of the conventional approaches used in other contexts.

A hybrid problem needs a hybrid solution. CAWG proposes that the Coast Guard should retain authority over all operations and equipment on the vessel itself. On-shore activities should be subject to the same systems as any other on-shore activities. However, the normal CTG process, in which

EPA develops CTGs that are enforced by local agencies in nonattainment areas, is not an appropriate vehicle for controlling marine vessel emissions.

**PARTICULATE MATTER (PM 10) NONATTAINMENT AREAS**

S. 1630 contains the beginnings of an elaborate set of requirements for PM 10 non-attainment areas. These are largely modeled on the provisions governing ozone non-attainment. Plans are due with 24 months, and attainment is to be reached within 5 years. Included are deadlines, demonstrations of reasonable further progress, CTGs, emissions fees on stationary sources, implementation audits, and such sanctions as construction bans and withholding of transportation funds.

The manner in which the bill deals with the PM 10 problem implies that the source-receptor relationship is an established principle. Were that so, the deadlines might be reasonable. This is not the case, however. The entrainment and dispersion of PM 10 primary particulates are not well-characterized. The understanding of the formation of particulate matter from gaseous precursors, principally $SO_2$ and NOx, is in its infancy. The deadlines will institutionalize conjecture, at best, or erroneous conclusions, at worst. Instead, EPA should be given the time and resources to perform the research necessary to develop the tools necessary to develop effective control strategies.

There is also an implicit assumption in the proposed legislation that stationary sources are the principal sources of primary PM 10 as well as of the secondary PM 10 precursors. Currently available data indicate that this is generally not the case. Vehicular sources are a major and often the principal source of these pollutants. EPA should be instructed to conduct the research and development necessary to provide guidance to states to control PM 10 from all sources taken together.

The control of PM 10 is a highly complex problem. The formation and suspension of particulate matter is affected by many variables, such as wind, temperature, relative humidity, concentration of other chemical species, and other factors. It is a problem that must be addressed at the local level. The blanket imposition of control technology requirements for all sources can result in large expenditures with few or no results. Statutory requirements concerning the means of control that are imposed at the federal level remove the flexibility local authorities need to attain clean air.

For all of these reasons, PM 10 controls should remain a regulatory issue; legislative requirements of the type contained in the bill should not be imposed.

It should be emphasized, though, that the approach to PM 10 taken in S. 1630 is far preferable to the approach embodied in S. 1490. The latter proposal has a series of shortcomings:

- Overbroad PM-10 Nonattainment Designations. S. 1490 designates as nonattainment any county that contains even a single site for which monitoring data show a violation of the standard. County-wide non-attainment designations have no sound environmental basis and will arbitrarily impose different pollution control requirements depending on how states have chosen to draw their county lines. In many states, counties represent broad geographic areas. Under the bill, a single monitor would make the entire area non-attainment.

  Section 107 of the current law provides for the designation of nonattaining "air quality control regions, or portions thereof" -- allowing for the designation of non-attainment areas, as environmentally appropriate. In practice, the § 107 attainment status designations promulgated by EPA range in coverage from one or more counties to far smaller areas surrounding named industrial sources or bounded by named streets. These determinations are based on the extent of the environmental problem presented, and there is no reason to change the current approach.

- Designations Based on EPA Statistical Analysis. In automatically designating as nonattainment all areas identified as "Group I" S. 1490 incorporates designations based on statistical analysis rather than monitoring data. When EPA promulgated the area groupings, sufficient PM-10 data from ambient samplers was not yet available to allow for comprehensive area designations. Therefore, EPA developed a statistical method for estimating the probability of PM-10 standard violations in a given area. The bill adopts the "Group I" designations wholesale, thereby infusing these statistically-based categories with the force of law. There is no reason to adopt this approach other than administrative convenience. Given the consequences that attach to a nonattainment designation, those designations should be based on monitoring data, not "probabilities."

- New PSD Increments. While the development of the new PSD increments is necessary in order to reflect changes in the standard, S. 1490 effectively "locks in" specific increments without regard to the potential need for further adjustment in the event the PM-10 standard changes (either up or down). Section 108 of S. 1490 should be amended to clarify that the Administrator may change the PM-10 standard itself changes.

**CARBON MONOXIDE (CO)**

– S. 1630 would require the use of fuels containing at least 3.1% oxygen by weight from October 1 through March 31 of each year in all carbon monoxide (CO) nonattainment areas.

This 3.1 percent oxygen requirement is a de facto ethanol mandate. Although the program would allow oxygen credit trading to achieve an average 3.1 percent oxygen content for fuel sold in those areas, it would impose additional costs on fuels, such as MTBE, which under EPA regulations can only be blended at up to 2.7 percent oxygen. Thus, MTBE would be placed at a competitive disadvantage since MTBE blenders would be required to purchase these oxygen credits from ethanol blenders who are already enjoying a substantial subsidy for their fuel.

A widescale ethanol mandate would impose significant costs. Ethanol-gasoline blends will separate in the presence of water. Therefore, if ethanol blends were to be more widely used and shipped by pipeline, substantial new investments would have to be made to make the entire motor fuels distribution system water-free. This means dehydration equipment would have to be installed in pipelines and all floating roof storage tanks would have to be modified.

The CO problem is diminishing as newer cars replace older, higher-polluting cars. Most nonattainment areas are likely to reach attainment without requiring an oxygenated fuels program. Thus, a requirement that such a program be implemented in all CO nonattainment areas is not justified. Further, such a high oxygen content requirement is unlikely to prove cost-effective since most of the CO reductions that can be achieved by adding oxygen to fuel can be achieved at a 2 percent oxygen level, allowing MTBE and even ETBE to compete in the marketplace.

A federal program should not be imposed on those few areas where additional action may be needed. Instead, those areas should be directed, as in S. 1490, to develop programs specifically tailored to their own local conditions-- programs which hopefully will retain a choice of fuels for consumers.

## CONCLUSION

In conclusion, once again CAWG would emphasize the importance of the Advance Planning Program to the effort to reach the goals of the Clean Air Act. Attainment of air quality standards is not a crisis but a long term goal. If the nation does not take advantage of the opportunity to develop and implement a rational long-term program, all of us will be back here again in a few years, debating once again why all the money and effort have not reached the goal. CAWG, and, we believe, everyone else would very much like to make this the last great Congressional debate over ozone nonattainment.

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D. H. Smith
Senior Vice President
Manufacturing, Engineering & Technology

November 3, 1989

The Honorable Joe Lieberman
United States Senate
Washington, DC 20510

Dear Senator Lieberman:

We appreciated the opportunity to appear before the Environmental Protection Subcommittee on September 27, 1989 to discuss the Clean Air Working Group's (CAWG) views on general nonattainment issues.

In response to your subsequent questions that were relayed to me by CAWG, I am pleased to submit comments on behalf of the Clean Air Working Group in the attached paper. Since Question number 6 was directed to ARCO, I have answered that question on behalf of ARCO.

If we may elaborate further on any of the points in our testimony, please do not hesitate to contact us. Thank you again for the opportunity to appear before the committee to discuss our views.

Respectfully yours,

Dwaine H. Smith

for the Clean Air Working Group

ARCO Products Company is a Division of AtlanticRichfieldCompany

**Responses to Senator Leiberman's Questions**

**Panel 1 - Wednesday, September 27, 1989**

To: Mr. Smith, Clean Air Working Group

**Question 1:**

What precisely is the basis for your conclusion that immediate action is not necessary?

**Responses to Questions 1**

CAWG does not conclude that immediate action is not necessary. On the contrary, action is required but not under the pressure of another "public health crisis" situation. Once again such an approach would place states under great pressure to start imposing costly new control measures without the benefit of a comprehensive data base for selecting the most efficient and cost effective strategies.

In spite of extensive research, the effects of typical ambient levels of ozone on human health remain the subject of considerable debate. A real need exists for improved knowledge of the health effects of ozone and a more realistic perspective of the numbers of individuals exposed to elevated ozone levels and the frequency and duration of that exposure. It is thus an oversimplification to associate "nonattainment" with "unhealthy". In fact an API study indicates that 99.4 percent of the time, the nonattainment cities (excluding Los Angeles) meet or better the ozone standard (see also the response to Question 2).

Nonattainment areas are certainly not faced with a "worsening" ozone problem. It is true that several cities did record increases in the number of times their air quality failed to meet the ozone standard in 1988. However, a recent analysis of ozone measurements, by Kay H. Jones of Roy F. Weston Inc., shows that 1988 was an unusual year from a meteorological stand point. The summer of 1988 was one of the hottest on record and the excessive heat contributed to the increased formation of ozone in the large metropolitan areas, conditions returned to nearly normal in all areas for the summer of 1989 according to Jones. For example, Baltimore exceeded ozone standards for 34 days in 1988 and 2 in 1989 and Washington, 30 in 1988 and 3 in 1989. Existing controls for VOC and NOx emissions, as well as additional measures scheduled for phase in over the next 2-3 years should result in continued improvement to the air quality in all of these nonattainment areas.

CAWG urges however that now is the time to assess the longer range problems, obtain better information, improve modeling and more thoroughly analyze the problems and solutions under an Advance Planning Program (APP). Furthermore, CAWG is not suggesting that VOC controls be put on hold during the implementation of the APP. In fact, EPA is currently proposing new VOC controls and will begin to enforce recently promulgated regulations. Also, EPA is involved in an extensive SIP call which will require states to upgrade their inventories and implement those parts of their existing SIPS which they have failed to implement. All of these efforts will continue the reductions in VOC emission we have seen since 1969.

## Question 2:

The thrust of Mr. Smith's testimony is that EPA's method of determining whether the ozone standard is violated is a "deeply flawed concept" and we should not be making major social and economic decisions based on this method. I know that NRDC, for example recently issued a report concluding that, in fact, EPA's method understated this problem.

Mr. Ayres, what conclusions did NRDC reach on this issue? Do you agree with Mr. Smith's testimony that the exposed populations are decreasing?

Mr. Smith, have you reviewed NRDC's comments on this issue and what is your reaction?

## Response to Question 2

CAWG has reviewed NRDC's comments on EPA's method of determining whether the ozone standard has been violated. NRDC concludes that EPA's method understates the actual frequency of exceedances of the ozone standard in most nonattainment areas, and therefore the public is exposed to high levels of ozone much more frequently than EPA states. First it is important to understand EPA's approach to monitoring and use of the "design value" in classifying an area as nonattainment. EPA requires that every air quality area be monitored for ozone by placing monitors in areas where high ozone levels are likely to occur. Hourly recordings are collected at each monitor and if, over a three year period, four readings from any monitor are in exceedance of the standard then the entire area is out of attainment. This fourth highest reading above the standard is called the "design value". This "measure" focuses on a one-hour peak concentration figure as defining nonattainment in an entire area and is not representative of average air quality in the entire air region. Citing the number of exceedances (the number of days that ozone concentrations are above 0.12 ppm for more than one hour) for an area can also be misleading if one does not consider these exceedances relative to the number of one-hour ozone concentrations measure at or below the standard. API completed an hour-by-hour analysis of ozone concentration measurements in a five-year period 1981-1985 for several cities in nonattainment areas. The objective was to determine the percent of monitor hours that ozone levels were at or below the 0.12 ppm standard for all monitor hours in an area during the ozone season. This study concluded that, overall, 99.4 percent of the time ozone levels in these cities (excluding Los Angeles) are, in fact, below the 0.12 parts per million standard. Thus it can be said that the public is breathing air which meets the ozone standard 99.4 percent of the time.

CAWG agrees with NRDC that the "design value" monitor does not present a comprehensive picture of air quality in an area. Design value ignores other important considerations such as the magnitude and duration of the exceedances. It does not recognize that different conditions may exist in different parts of nonattainment areas and that monitors are usually cited to identify the worst levels and not average levels and are not tied to population exposure. CAWG concurs with NRDC and would also urge EPA to modify the method it uses, so that the public will receive a more accurate account of the frequency and true magnitude of ozone exceedances in their locality.

Question 3:

Mr Smith: You apparently contend (p. 10) that the legislation is fundamentally flawed because EPA can choose to ignore important research by industry and there is no guarantee that EPA's decisions will be made in an unbiased manner. In fact, Mr. Smith, the comment we frequently hear is that EPA's regulatory decisions are often weighed in favor of those who are regulated.

Do you have any basis for your contention that EPA's decisions on emission control technologies, air pollution modeling, emissions factors for stationary sources, design values, and the efficacy of controlled technologies (to quote your list will ignore important research by industry, be rejected without explanation and be based on considerations other than technical and scientific expertise?

**Response to Question 3**

CAWG does not contend that EPA's decisions do not consider research by industry or other scientific and technical expertise. It is our conclusion that the proposed current legislation under S.1630 does not include a system whereby the interested public can be assured that regulatory decisions are based on the best technical and scientific expertise and research. CAWG recommends that S.1630 contain a provision that requires EPA to establish a board to review the technical and scientific data, analyses and assumptions upon which regulatory determinations rely. In addition, provisions need to be added to strengthen input the technical and scientific decision-making process. For example, GAO is currently conducting an inquiry into EPA's consideration of comments and technical input in its development of MOBILE4, a model used by the states to determine the mobile source contribution of ozone precursors. This inquiry came about because of complaints about EPA's apparent failure to consider technical input from outside of the agency.

**Question 4:**

In your testimony, you state that you oppose any mandatory interim reductions. In the absence of mandatory interim reductions, what assurances do have that any areas will ever achieve compliance with the standards?

## Response to Question 4

. CAWG opposes the principal of mandated specific annual reduction (i.e. 12 percent every three years until attainment). Mandatory annual reductions are a poor policy because the need for immediate payoffs distorts the choices. For example, these requirements invariably force states to look to large stationary sources for immediate emission reductions. Other sources such as "area" sources are overlooked because they have a longer lead time for implementation. This "leveraged" situation provides a strong case for careful analysis and planning as in the Advanced Planning Program. The state would be given the opportunity, based on information obtained from inventories and the planning process, to judge whether emission reductions can be obtained from individual smaller sources such as "area" sources, rather than large, "visible" stationary sources. Reducing the number of choices available to a state by imposing arbitrary milestone requirements makes ultimate success in achieving attainment unlikely.

Furthermore, CAWG believes that any system of mandatory reductions should give credit for all emission reductions, including those from decreases in gasoline volatility.

CAWG Response to Senator Leiberman
Panel 1, September 27, 1989

**Question 5:**

I am concerned about your suggestion to count the gasoline reid vapor reductions as part of an area's interim percentage reduction targets. Isn't it true that the reduction from gasoline reid vapor would be large in the first several years and then taper off dramatically?

**Response to Question 5**

As stated in question 4, CAWG believes that all VOC emission reductions, including a decrease in fuel volatility, should be credited towards an area's percentage reduction targets. The percent reduction from a lower gasoline reid vapor pressure (i.e. 9.0 psi vapor pressure) would be significant in the first year (estimated at 11 percent from baseline) and would not taper off drastically but remain constant in each successive years of implementation.

**Question 6:**

"Several members of this committee have become increasingly concerned about the interaction between our environmental and energy policy. ARCO had taken a leading role in searching for alternative energy supplies, particularly in the solar area and this was particularly encouraging. That's why the company's recent decision to sell its solar company to a German company was particularly troubling. Why did the company make this decision at so critical a time for the energy and environment problems facing this country?"

**Response to Question 6**

In response to your question about ARCO's disposition of ARCO Solar, I would offer these comments.

ARCO is also concerned about the interaction between our environmental and energy policy. Certainly, environmental policy is altering the way in which we conduct our business by raising the level of uncertainty with which we have to cope in our core business - energy.

With respect to ARCO Solar, upon completion of the sale, ARCO Solar will become part of Siemens' U.S. group of companies which employes some 30,000 people in 46 states. It is Siemens' intention to retain ARCO Solar management, staff and the manufacturing facility in Camarillo, California, and to continue the outstanding R&D work done there over the years.

The photovoltaic technology being developed and produced at ARCO Solar will continue to be available worldwide. Whatever scientific advances that ARCO Solar will make under Siemens' management will find application in the United States, one of the world's largest photovoltaic markets. And, should photovoltaics ever reach a point where they can help solve the world's environmental problems, the applications will not only be universal but universally available. Thus, we do not believe that the shift of the asset to Siemens will, in any way, hamper progress toward the development of the potential of photovoltaics.

Siemens has both the expertise and the financial resources to further the progress of ARCO Solar. Moreover, ARCO's management chose Siemens because Siemens made the commitment to maintain ARCO Solar's leadership in photovoltaics. ARCO is proud of ARCO Solar's achievements, and we look forward to its continued technological success under Siemens' management.

With respect to the business decision to transfer ownership of ARCO Solar, ARCO invested over $200 million in ARCO Solar over the past 12 years. [During that time, government technology funding for ARCO Solar totaled about $3 million - certainly welcome, but not a critical element in the prospective financial viability of the company.] ARCO Solar has never been profitable, and the sale price will not come close to covering ARCO's 12 year investment.

In light of the foreseeable world supplies of energy as well as the Company's current judgement with respect to the intermediate and long term prospects of photovoltaics to make significant contributions to both energy and environmental concerns, ARCO management decided that our limited resources could be put to better use elsewhere. Please be assured that ARCO Solar's excellent technical start - despite our financial loss - will serve as a solid foundation on which Siemens can build. If Siemens is successful - and it appears that they have the will to support further technology and applications research, then the entire world will benefit from their success. We have given ARCO Solar a solid and excellent start and we wish Siemens well as they strive to move ahead in the field of photovoltaics technology.

Dwaine H. Smith
Senior Vice President
Manufacturing, Engineering & Technology
ARCO Products Company
for the Clean Air Working Group
November 3, 1989

# TESTIMONY OF
# RICHARD E. AYRES
# CHAIRMAN, NATIONAL CLEAN AIR COALITION

to the

SENATE ENVIRONMENT COMMITTEE

SUBCOMMITTEE ON ENVIRONMENTAL PROTECTION

on

S. 1630 and S. 1490

Wednesday, September 27, 1989

Mr. Chairman, Members of the Committee. My name is Richard E. Ayres. I am senior attorney at the Natural Resources Defense Council and Chairman of the National Clean Air Coalition. I speak today in behalf of the coalition's 31 national organizations, hundreds of local organizations and millions of individual Americans.

Our membership encompasses environmental organizations, labor unions, church groups, organizations dedicated to public health, consumer groups and other public interest organizations. We are a broad coalition, bound together by a common commitment to protecting public health and the natural environment from air pollution.

The Committee's focus today is on the central public health program of the Clean Air Act -- the "nonattainment" program, which has as its goal nothing less than the achievement of healthful air quality across the nation.

## I. The Need for Legislation

I know the Subcommittee members share my hope that these hearings are a prelude to action in this Congress on a new Clean Air Act for the nation. Legislative action is long overdue.

This committee has seen a painful eight year stalemate over the course of clean air policy. The progress of the 1970's has given way to stagnation in the 1980's. In 1980, our clean air program was in such good shape that the National Commission on Air Quality, on which I served, was able to predict success by 1987. The Commission reported it had identified only

> "seven areas that may have problems attaining the ozone standards in 1987 if the various control strategies contained in the 1979 State Implementation Plans and under consideration for the 1982 State Implementation Plans do not provide the benefits projected in the state plans.
>
> "With the exception of Houston and several California cities, areas still exceeding the standard after 1987 will probably have only infrequent instances when the standard is exceeded, and peak ozone values in most of those areas will be substantially lower than they now are."

For carbon monoxide, the Commission reported only Denver and Los Angeles would miss the 1987 deadline if plans were implemented, and the EPA's analysis suggested only Los Angeles would fall short.

This analysis was confirmed in essence by EPA in 1982, when then-Assistant Administrator Kathleen Bennett predicted only a half-dozen cities would fall short of their smog cleanup goals.

The reality, of course, is far less optimistic. Based on 1988 measurements, EPA now lists 101 areas -- home to 140 million Americans -- suffering chronic smog problems.
EPA lists 44 nonattainment areas for carbon monoxide. Dozens more areas suffer health threatening levels of fine particulate. Clearly, the nation needs and deserves a more ambitious, workable smog fighting plan.

The reasons for this air quality emergency are many and varied, but they boil down to one, in my judgment. The air is polluted today because, despite some progress, we still allow too many of man's activities to use the atmosphere as a dump for waste and unwanted materials. The air is polluted today because too many people -- bureaucrats, political leaders, business executives -- have seen short term gain in allowing too much pollution and requiring too little control.

We know polluted air is caused by pollution emissions. We have the technology and the engineering skill to control emissions. And where controls have been used, they have produced substantial air quality improvements. Yet, in too many cases, control has been inadequate or lacking. Now, the country is paying the public health price for polluted air.

## II. The Proposals Before You

Pending before you are two comprehensive revisions of the nonattainment program, S. 1630 and Titles I and II of S. 1490. Of the two bills, only one responds adequately to the public health emergency of air pollution. That bill is S. 1630, the

Clean Air Restoration Act. S. 1630 would restore momentum to the national fight against smog. The structure is sound and programs are appropriate to meet the goal. Our primary concern is with the pace of the program.

Overall, S. 1630 is a good bill in substance. With tighter timetables, more ambitious cleanup milestones and certain other changes it could be a even better.

Motor Vehicle Emission Controls. Particularly encouraging is the bill's comprehensive motor vehicle program, which recognizes that cleaning up smog and responding to global warming will require a truly clean and fuel efficient car for the 21st Century. The bill specifically prohibits averaging schemes that weaken pollution control by allowing less-than-best technology.

Pollution control for cars has been one of the success stories in the battle against air pollution. But transportation sources are still the number one source of smog-causing emissions, and the progress to date is being eroded as a result of increases the number of cars on the road and vehicle miles traveled. In short, cleaning up America's cities will require cleaning up the family car.

S. 1630's two-stage approach would reduce allowable auto tailpipe emissions by two-thirds over the next 14 years, forcing technology if necessary in the tradition of the Clean Air Act. Some of today's cars, large and small, already meet these stringent standards in certification tests. S. 1630 would require that all cars meet them in the 21st Century. S. 1630 also contains a number of other vehicle durability, testing and other requirements designed to force use of truly clean vehicles for the nation's transportation future.

Transportation Planning. The bill addresses the issue of vehicle use squarely by requiring comprehensive transportation plans. These provisions represent a genuine advance in the clean air debate, and deserve special recognition.

Vehicle use is now growing at 2.5 per cent per year nationwide, and 4 to 5 per cent in some of our fastest growing cities. This growth must be restrained, or air quality improvements from motor vehicle emission controls will be overwhelmed by traffic growth. We must develop urban transportation systems that give more Americans efficient, less-polluting alternatives to the single-occupant vehicle.

As we have learned from the past, the transportation choices a city makes will often determine whether the area can achieve air quality goals, or will be doomed to suffer increasingly contaminated urban air. Transportation planning must become part of the air quality solution, rather than part of the problem.

The Coalition strongly endorses the effort of the Committee to clarify the "conformity" provision of Section 176(c) of the law. The "conformity" amendment has the strong support of transportation agencies, mayors, state air program administrators, as well as the Coalition.

We also support your effort to add the twenty-year maintenance plan requirement to assure that air quality and transportation plans are developed on the same time horizon.

Progress and Penalties. S. 1630 requires real cleanup progress in our polluted cities, and provides real penalties for failing to make progress and failing to achieve clean air.

The fact that this is truly a bipartisan bill, with cosponsorship from across the political spectrum, is a tribute to you, Chairman Baucus and you, Senator Chafee. Your leadership on this issue, exemplified by your coauthorship of S. 1630, is a welcome example of bipartisanship and a partnership that we believe is vital to the cause of clean air.

The Administration Bill. The nonattainment provisions of S. 1490, the Bush Administration's smog cleanup program, on the other hand, are unacceptably weak, vague, unenforceable and discretionary. The program does not require all polluted areas to revise today's failed cleanup plans; changes in today's inadequate motor vehicle control programs are largely symbolic; auto standards are weaker than the requirements already adopted in California. In some cases, current law would actually be weakened and standards rolled back or made vulnerable to industry lobbying of the EPA. (For example, the gasoline vapor regulations recently adopted by the Northeastern States would be imperiled. And the Administration's auto tailpipe proposal would allow more pollution than today's tailpipe standards.)

Needed Improvements in S. 1630. We expect and hope that S. 1630 will become the basis for the Senate's response to our nation's smog problem, and that the Subcommittee will begin its markups quickly. During those markups, we will recommend a number of specific areas of improvement, primarily in the bill's timetables.

First and foremost, the legislation grants unnecessarily long deadlines for achieving healthful air quality. We believe every city outside Los Angeles can meet and should be asked to meet a cleanup deadline of 10 years.

Several of the most polluted urban areas would be granted 15 year deadline extensions, 20 years in the case of Los Angeles. I should note that 20 years is at least three years longer than the deadline already adopted in the cleanup plan for Southern California. Many other deadlines can and should be shortened. For example:

EPA's would have no power to impose pollution control requirements directly in a state that refused to submit an adequate plan, or carry out its plan, until 3 years after the close of a formal finding process.

The bill contains a rather relaxed schedule for issuing Control Technique Guidelines.

EPA could take five years after it imposes a construction moratorium to issue a federal plan demonstrating attainment.

The Phase II motor vehicle standards would not take effect until 2003, even though some of today's cars -- large and small --already meet the second phase hydrocarbon and NOx standards.

Eliminating lead from gasoline could take until 1993 if all extensions are granted.

In areas with serious air pollution problems, emissions fees substantial enough to provide an aggressive cleanup incentive would not be imposed for 10 years, making the fee requirement seem more like a penalty for cleanup failure than an incentive for early control.

In closing, let me point out two other areas for improvement. First, the bill contains an insufficient commitment to nitrogen oxide control, which is a key to cleaning up smog and acid rain. We believe the bill ought to require substantial additional control of NOx.

Second, the bill takes one step forward and one step back on the question of a regional response to smog. The bill correctly specifies that nonattainment plans should cover the entire metropolitan statistical area or consolidated metropolitan statistical area where applicable. And the bill does establish by law a regional smog program for the Northeast.

But new control requirements outside the MSA's and CMSA's are limited to counties above 100,000 population, and even here an administrative waiver is provided. The population limit makes the regional smog fighting plan more apparent than real, and we urge its elimination. Smog is a regional problem that demands a genuinely regional solution.

To conclude, Mr. Chairman, the National Clean Air Coalition supports your efforts to fashion a revitalized Clean Air Act. Air pollution shortens lives, increases medical costs, diminishes human productivity, cuts crop yields. Careful estimates suggest between two and five percent of deaths in the average urban area are related to air pollution. That amounts to tens of thousands of shortened lives, a scourge comparable to infant mortality or auto accidents.

Death and disability have financial as well as human costs financial costs estimated in the tens of billions of dollars. The American people want clean air. Survey after survey confirms their desire, and their willingness to pay for it. Mr. Chairman, the time has come for action -- comprehensive, aggressive, ambitious action -- to clean up our skies and remove the public health threat of air pollution.

Thank you.

# Statement of the U.S. Chamber of Commerce

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ON: Clean Air Restoration and Standards Attainment Act of 1989 (S. 1630)

TO: Subcommittee on Environmental Protection of the Senate Committee on Environment and Public works

BY: Dr. Harvey Alter

DATE: September 27, 1989

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The Chamber's mission is to advance human progress through an economic, political and social system based on individual freedom, incentive, initiative, opportunity and responsibility.

# STATEMENT
on
# CLEAN AIR RESTORATION AND STANDARDS ATTAINMENT ACT OF 1989
(S. 1630)
before the
SUBCOMMITTEE ON ENVIRONMENTAL PROTECTION
SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
for the
U.S. CHAMBER OF COMMERCE
by
Dr. Harvey Alter
September 27, 1989

I am Harvey Alter, Manager of the Resources Policy Department of the U.S. Chamber of Commerce. I am pleased to represent our members in commenting on S. 1630.

Everybody wants a clean environment. Although pollsters report that 87 percent or so of the public wants clean air, that does not mean that 13 percent want dirty air. I make this point to emphasize that discussions -- even arguments -- over various clean air proposals are not "we" against "they" -- or clean against dirty. Rather, the discussions are -- or should be -- how best to reach the goals of protection of public health and the environment goals that all of us seek.

Hopefully, the discussions of reauthorization of the Clean Air Act (CAA) this year will differentiate between goals and strategies with an understanding of which health and well-being goals we want to achieve and which strategies we wish to use to achieve them. (Appended to these remarks is a copy of an article addressing the need for this differentiation, titled "Everybody Wants Clean Air.")

The Chamber supports, like everyone else, clean air legislation, protection of public health and the environment and the prompt attainment of the National Ambient Air Quality Standards (NAAQS) in all parts of the country. In order to achieve these goals, it supports the strategies inherent in the structure of the CAA of NAAQS, emissions standards and the State Implementation Plan (SIP) process. Further, the Chamber recognizes that these strategies are not fully successful in that there remain areas of the country that are exceeding the NAAQS. The question at hand in discussing S. 1630, the Clean Air Restoration and Standards Attainment Act of 1989, and all the other clean air legislative proposals before the 101st Congress is how to alter the strategies to meet the goals without harming the economy. The U.S. cannot be so zealous as to impose control for its own sake, to the detriment of the economy, in the name of goal fulfillment.

Estimated costs of the various proposed changes to the CAA range from $14 to $100 billion per year, *which would be in addition to the approximate $30 billion a year the country is now spending on air pollution control.*

Quality environmental management is costly and can be afforded only by large companies and affluent economies. We are forced to see the paradigm that economic and industrial development, which require environmental management and controls, generate the wealth needed to afford this same management and controls, if there is to be subsequent quality of life. The findings of the World Commission on Environment and Development, chaired by Norwegian Prime Minister Brundtland,[1] stated emphatically that the greatest pollution is poverty and that environmental quality can be assured only through sustainable economic development. This conclusion is as true for the United States as for any other country, developed or developing.

How then do we achieve public health and environmental goals while not slowing the economic engines that produce the ability to meet the goals? Furthermore, can both large and small businesses participate in this effort, within their respective means, with the attention to the economy noted above?

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[1] World Commission on Environment and Development. 1987. *Our Common Future*. Oxford University Press. New York.

## Summary

This statement addresses several facets of S. 1630 with an emphasis on the question: Does the present nonattainment situation warrant the proposed regulatory approach? In some cases, it may; in other cases, it does not. It is the Chamber's premise that the present nonattainment situation is not well understood with the result that there is a tendency to over-correct. Nonattainment is not necessarily synonymous with unhealthy air. If the country does not come to grips with this important distinction, it will severely damage its economy in striving for some sort of nirvana of clean air.

The emphasis of this statement is the likely effect of S. 1630 on small businesses. However, many of the points raised apply to medium and large-sized businesses as well.

S. 1630 provisions concerning area boundaries, inventories, permit fees, emission fees, reductions in Serious and Extreme areas, employers' transportation plans, and guidelines for PM-10 (particles less than 10 micrometers in diameter) sources are addressed. Deficiencies are pointed out and suggestions for improvement are offered.

This statement also emphasizes the proposal to regulate consumer products. There are many things wrong with the approach to regulating consumer products as a "stationary source." Also, we point out that this "source" is so small that the effort could be better spent elsewhere.

## The Nonattainment Situation

This Committee is familiar with the Environmental Protection Agency's (EPA) definitions of nonattainment whereby few excursions from the NAAQS, from even one monitor in an air shed, can classify an area as nonattainment for three or more years. Thus, merely counting cities in nonattainment gives an incomplete picture of the air quality situation. A count gathers cities presently below the NAAQS (recovering from an exceedance) with those that may have a persistent problem. The concept in S. 1630 of categorizing cities as "Moderate," "Serious," "Severe" and "Extreme," based on the amount by which the NAAQS is exceeded, is a positive move away from the present misleading system. However, we suggest it is still incomplete.

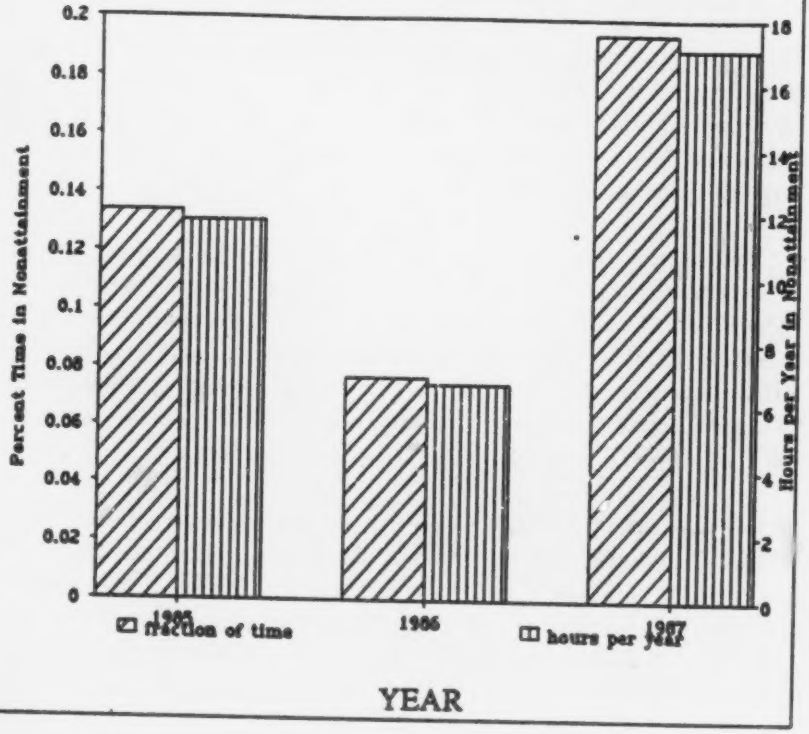
Figure 1 shows the average percentage of time (diagonal stripes) and number of hours per year (vertical stripes) that 32 cities were in nonattainment for 1985, 1986 and 1987. The 32-city average does not include Los Angeles, which for the longer period 1985-1987 (for all monitored hours), exceeded the ozone NAAQS an average of 2.02 percent of the time or about 177 hours per year. The numbers for Los Angeles are about ten times the highest numbers shown on Figure 1.

Because of the "adequate margin of safety" in the NAAQS required by the CAA, a small exceedance is a warning indication, *not a health hazard*. A large exceedance is a reversible or irreversible irritation, depending on the concentration of ozone. Similar observations can be made for carbon monoxide attainment.

This is not to advocate an immediate change in the structure of the CAA but rather to expand our thinking and understanding on the subject of nonattainment and avoid rushing to the wrong judgments and conclusions, hence to misdirected strategies that will only delay goal fulfillment. This subject is so important for the country that this Committee may wish to include a provision in S. 1630 to have the EPA begin studies of more complete ways of expressing nonattainment. After all, the current method of describing nonattainment is rather old.

Figure 1 also illustrates the Chamber's concern over misallocation of resources. A city in nonattainment 0.05 percent of the time (about 4 hours a year) may, at that time, exceed the standard by more than 20 percent (even higher) at one monitor and thus be classified as "Severe." It would be a misallocation of resources to impose the requirements of S. 1630 in such situations which would again delay fulfillment of the CAA goals.

Fig. 1. Extent of Nonattainment in Most Cities



**Comments on S. 1630**

*Area Boundaries.* Sec. 101(c) which amends area boundaries, permits expansion of the boundaries of an area designated as nonattainment with respect to ozone or carbon monoxide. We suggest that expansion of boundaries requires installation of additional monitoring stations. As it is now, too many areas have too few monitors, with the result that a complete "reading" of the area is not possible. Further, additional monitoring should be coupled with new methods of determining nonattainment so as not to judge nonattainment on the basis of statistical outliers.

This subsection has a detrimental effect on small businesses located in attainment areas that happen to fall within the boundaries of a city. Under the proposed new paragraph in S. 1630, these areas, which are now in compliance, would be redesignated as nonattainment if the city has nonattainment areas within its boundaries. Since most cities have both types, many small businesses that now do not face regulation under the CAA would be forced to comply with the new provisions. This is an unreasonable burden.

This subsection fails to accord those businesses an opportunity to challenge either the Office of Management and Budget's definition of "metropolitan statistical area" or the redesignation of the entire city as nonattainment. Furthermore, since no criteria are established for the redesignation process, the EPA Administrator has no discretion in the process. If, for example, 95 percent of a city were in attainment, but 5 percent were not, the Administrator has no option but to redesignate the entire city as nonattainment.

Related, Sec. 102(g) addresses the enhanced monitoring but not the ability to reject statistical outliers. That is, there may be one eight-hour excursion from the NAAQS that is statistically insignificant or one monitor at the fringe of an area that for weather reasons may occasionally show exceedance of the NAAQS. On this basis, the entire metropolitan statistical area (SMSA) would be designated nonattainment.

*Inventories.* The Chamber commends the Committee for including enhanced monitoring and improved inventories of emissions, including the improved inventories that would be required under Sec. 182(a)(1). Both are essential for achieving attainment. However, Sec. 106 (i) places a horrendous burden on small businesses. It reads:

> [Sec. 182(a)(2)(A) a revision to the State implementation plan that contains a requirement that the owner or operator of each stationary source of oxides of nitrogen or volatile organic compounds with an ozone nonattainment area ... provide the State with a statement ... showing the actual emissions from the source during the previous calendar year of oxides of nitrogen and volatile organic compounds.

The subsection applies to all stationary sources, regardless of size. Thus, even the local service station or neighborhood bakery will have to monitor its emissions, especially if the business is located within the boundaries of a city.

Furthermore, the monitoring required is of actual emissions for the entire calendar year. On its face, the subsection requires the owner of a small business to monitor emissions every day for the entire year. The subsection does not allow the owner to estimate those emissions or to monitor the actual emissions for a short period of time and extrapolate. The requirement that stationary sources report actual emissions is onerous.

This requirement is more burdensome than Congress requires under Sec. 313 of the Emergency Planning and Community Right-To-Know Act, which applies to toxic air pollutants.[1] Sec. 313 requirements are satisfied with estimates of emissions rather than actual monitoring. If the estimates are satisfactory for toxic air pollutants, requiring a more stringent standard for less hazardous ozone is burdensome.

Emission monitoring is a complicated and expensive process. Consequently, most small businesses will be faced with the choice between two expensive options: either installing monitoring equipment (whose operation and maintenance is likely to be beyond their ken) or contracting with an outside expert in the field. The results of such an addition to the CAA could drive many marginally viable businesses into bankruptcy.

In addition, while the subsection allows a state to waive the monitoring requirements for small stationary sources (sources emitting less than 25 tons per year), the state may do so only so long as the state itself "provides an inventory of emissions from such class

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1. *See* 42 U.S.C. Sec. 11023 (1989).

or category of sources." While this might appear to be a practical exemption, in reality it is not. Under S. 1630, the states will be extremely busy complying with the Act's new requirements within the statutory time frames. This increased activity coupled with ever shrinking financial resources, means that exempting small stationary sources from the monitoring requirements will receive negligible attention.

The Chamber urges that this section be amended along the lines outlined to provide a small business *de minimus* exemption and to permit estimates of larger emissions.

*Permit Fees.* S. 1630 would amend Sec. 173 of the CAA regarding permit fees to be sufficient to cover all direct and indirect costs of administering the permit program. We suggest that somewhere the word "reasonable" be inserted to prevent the inclusion of peripheral costs or overhead and the subsequent escalation of the fee structure.

*Offsets.* The same section address offsets by "a greater reduction in the actual emissions..." While the Chamber supports offsets (and accompanying emission trading), it must note that this section does not address emissions reductions below permitted levels that a source manager may have husbanded or otherwise conserved for future permits or trading. The use of actual emissions punishes those operators who have reduced emissions below permitted levels. Further, Sec. 182(c)(2) (and elsewhere in S. 1630) sets offset ratios for the various categories of attainment areas. Such offsets are likely to be achievable only by major sources, not by small businesses. Again, some sort of *de minimus* criterion is indicated.

*Emission Fees.* Throughout S. 1630, emission fees are established ranging from $25 to $5000 per ton of volatile organic compounds, oxides of nitrogen or carbon monoxide emitted, with the per ton fees adjusted for the Consumer Price Index and depending on the classification of the nonattainment area. The imposition of such fees is punitive beyond reason. The fees would be imposed on permitted facilities, operating within their permit limits. If an area is in nonattainment, which could be due to the failure of a third party, including a local or state government, a law-abiding operator would be punished. This would include operators who have installed BACT or LAER, who are hence at the bottom limit of their emissions where punitive emission fees are not encouragement to further lower emissions. Moreover, the fees likely would be imposed based on permitted emissions with a lag of many months (or years) before an audit of actual emission records could be used to correct the situation. The bookkeeping and transactional burdens will be large. The fees themselves will do little to bring an area into attainment. The Chamber urges that the concept of emission fees be stricken.

*Requirements for Serious Areas.* Sec. 183(b)(2) would require a "12 per centum reduction" in emissions of volatile organic compounds over a three year (a 12/3 requirement) period for Serious areas. As we read paragraph (B), it appears that the 12/3 requirement would continue beyond the first three years, presumably up to the full ten years allowed for serious areas to come into attainment, or a total reduction of about 40 percent. The Chamber urges that the appropriate paragraphs be amended to make clear that the 12/3 requirement is only for one three-year period. A 40 percent emission reduction, even over 10 years, is an unreasonable (if not impossible) requirement, short of shut-down.

*Employers' Transportation Plans.* Under S. 1630, requirements for Severe and Extreme areas include that employers with more than 100 employees reduce vehicle occupancy by 20 percent or be "liable to the State for a payment of a fee of not less than $50 per month for each employee parking space provided or subsidized by such employer." This requirement makes the employer police and enforce how employees travel to work. The requirement will impinge on some collective bargaining agreements and will affect some small businesses; the proposed legislative language does not differentiate between 100 employees total or 100 at a given location. For example, one of our members has a business that grosses $15 million per year and employs more than 100 people total in four states. Some of those locations are not near mass transit and employ few people, so that ride-sharing and car-pooling are not practical. Is this business to be fined $50 per month per space?

*Guidelines for PM-10 Sources.* In addressing particulate emissions (and precursors) of particles less than 10 micrometers in diameter (PM-10), Sec. 194(a) requires the Administrator to promulgate control technique guidelines (including RACT and BACT) for emissions from area sources which cause or contribute to PM-10 nonattainment. The measures are for combustion sources including prescribed burning for silvaculture and agriculture. We suggest that 18 months may not be enough. It has been determined over the years that prescribed burning for silvaculture and agriculture is often related to the future health of crops; *i.e.*, burning destroys plant disease carriers, such as fungi. Eighteen months is a short time for learning how to control PM-10 from such open fires and, hopefully, RACT and BACT will not require removal of the "fuel" to an incinerator. Here is a case where anxiety to control PM-10 can destroy cropping in parts of the country. Rush to judgments here are unfair to the agricultural portion of the national economy.

**Consumer Product Restrictions**

The provisions of S. 1630 to control consumer and commercial products must be highlighted. I do so because I worked for almost 14 years as a chemist for one of the nation's largest personal care companies, and was Technical Director, Research for the division concerned with hair care. I have more than a passing acquaintance with the difficulties of formulating such products.

The products are defined in S. 1630 as "any substance, product, or article (including any container or packaging) held by any person, the use, consumption, storage, disposal, destruction, or decomposition of which may result in the release of ozone precursors."

There are already serious restrictions placed on the formulation and packaging of such products. They must deliver a consumer discernible functional effect; they must be safe to use around and on people; there are new impositions on packaging to reduce the amount of solid waste destined for disposal. A tremendous amount of science, engineering and art is required to formulate and test such products. A reformulation may require years of laboratory work and subsequent field testing. I submit that it will be nearly impossible, even with great efforts over many years, for staff at the EPA to fully understand the art, science and engineering of these classes of products. Companies will not be able to do what S. 1630 calls upon them to do without destroying the functionality or consumer safety of the products. The losers will be the users of everything from personal care to commercial paint products.

It is significant that according to the White House[1], regulating this category of consumer products would cut volatile organic compound (VOC) emissions 2.5 percent. At the same time, it estimates that the regulations to control emissions from treatment, storage and disposal of hazardous wastes will cut VOC emissions by 3.2 percent. No estimate is made of controlling municipal waste landfills which emit methane, a VOC compound. The regulation of consumer products, as proposed in S. 1630, targets the wrong sources. There are targets more easily controlled that better fit the category of "stationary sources." Here is an example of choosing the right strategy to meet the goal of attainment, such as regulating hazardous and municipal solid waste VOC emissions.

The products contemplated are not of a particular type or class but cover a universe of commercial, household and personal care uses -- estimated at some 750,000 products. They include shaving cream, mouthwash, deodorant, perfumes, window cleaners, furniture polishes, kitchen cleaners, brake cleaners, antifreeze, windshield deicers, disinfectants, sterilizers, medicines, and the list goes on. These products cannot be viewed in the same way as traditional emissions sources. The CAA, up to this point, has regulated waste emissions and not products created for the benefit of society.

Most consumer products are marketed nationally and rely upon the freedom of movement traditionally and constitutionally accorded to interstate commerce. Any regulation of emissions from commercial and consumer solvents must not erect unnecessary barriers to the fee flow of commerce. There must be consistency in the national market. Any federal program ought to take particular care not to create incentives for states to adopt different or obstructive requirements.

The Chamber recognizes that S. 1630 and S. 1490, the Clean Air Act Amendments of 1989, provide for a study of the issues prior to regulation. Both provide that when the Administrator does issue regulations, he must consider technological and economic feasibility, as well as health, environmental, and energy impacts. Both also allow the Administrator to exempt health use products for which there is not a suitable substitute. However, there are still a number of areas in which improvement is required.

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[1] The White House, Office of the Press Secretary, "Fact Sheet: President Bush's Clean Air Plan." June 12, 1989.

*The Two-Year Study.* S. 1630 (and S. 1490) provide for a two-year study for the EPA to analyze the subject. This period is plainly insufficient, given what is said above regarding the complexities of this field. The Office of Technology Assessment (OTA) noted that next to nothing is known about either the ozone contribution or control technology for consumer products.[1] For this reason, OTA excluded consumer products altogether from its emission reduction potential and cost analyses.

It is unrealistic to believe that the factual vacuum can be filled within two years.

*Administrator Discretion.* S. 1630 does not give the Administrator discretion to regulate or not after the study. At the same time, it gives the Administrator great discretion regarding the regulations.

Under Sec. 107 of S. 1630, the Administrator may promulgate any regulations necessary to decrease the emissions of ozone precursors, including "requirements for registration and labeling, self-monitoring and reporting, prohibitions, limitations, or fees concerning the manufacture, processing, distributions, use, consumption or disposal of the product." Once again, the bill gives the Administrator a free hand to regulate in a manner regardless of the impact upon small or large businesses manufacturing, distributing or selling such products. If even a small number of the options are implemented, the costs to a small business could easily be excessive. In addition, the section fails to account for any conflict with existing federal and state laws already in place.[2]

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[1] Office of Technology Assessment. United States Congress. *Catching Our Breath: Next Steps for Reducing Urban Ozone*. 1989.

[2] For example, the Food and Drug Administration (FDA) regulates and approves the use of packaging materials for food and drug products. In addition, the FDA regulates and controls the labeling for all food and drug products. This bill fails to address the potential conflicts that might arise between the EPA and the FDA. Businesses might find themselves in compliance with one agency and in court with another.

*Product Fees.* S. 1630 authorizes the Administrator to employ a system of fees as a method of controlling VOC emissions from consumer products. The Chamber submits, *most strongly*, that any generic, unfettered provision authorizing the EPA to assess fees carries too high a potential to become simply a revenue raiser unrelated to ozone attainment. It further submits that such a provision is an unconstitutional delegation of the congressional power to tax. Economic incentives are useful for controlling emissions from stationary sources, but not for controlling emissions from consumer products by imposition of a regressive tax.

Any fees collected under this program are deposited in the U.S. Treasury to fund "activities of the Environmental Protection Agency." Without any limits on the fee structure, the Administrator has no incentive to limit the number or amount of any fees, especially since the fees collected under this bill are available to supplement EPA's general budget. At a bare minimum, any fees collected as a result of S. 1630 should fund activities under S. 1630. Furthermore, since the states are called upon to vastly increase implementation and enforcement efforts, any fees should be shared with the states to help defray these new costs.

**Coping With the Small Business Problem**

As pointed out, there are many problems in attempting to regulate small business emission sources as if they were the same as all other sources. Here, again, is an example of choosing the right strategy to meet the goals. If not, the strategies for small businesses will be so convoluted that they will unnecessarily raise costs, push businesses to close and delay attainment.

The Chamber is not asking for a blanket exemption for small business. Rather, it seeks a means of compliance which will allow flexibility. One way may be to institute a "Small Generator Technology Assistance Program." This could be a non-adversarial state entity to provide information on products that are environmentally responsible, equipment to control emissions, and methods of operation that would control releases to the air.

The Chamber calls your attention to testimony before this committee on September 21, 1989, by Mr. Benjamin Y. Cooper on behalf of the Clean Air Working Group (CAWG) on S. 816, the Toxic Release Prevention Act of 1989. The Chamber is an active member of CAWG and urges your consideration of a small business assistance program in every aspect of the CAA. The program described by Mr. Cooper is a good beginning.

PMAA PETROLEUM MARKETERS ASSOCIATION OF AMERICA

# *Statement of*

W. BRUCE CHILES
PRESIDENT
PETROLEUM MARKETERS ASSOCIATION OF AMERICA
and
PRESIDENT OF CHILES OIL COMPANY

# *Before the*

SUBCOMMITTEE ON
ENVIRONMENTAL PROTECTION
OF THE
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
U. S. SENATE

# *On*

THE CLEAN AIR RESTORATION
AND STANDARDS ATTAINMENT ACT OF 1989

SEPTEMBER 27, 1989

1120 VERMONT AVENUE, NW • SUITE 1130 • WASHINGTON, DC 20005 • (202) 331-1198

## MEMBERS OF THE PETROLEUM MARKETERS ASSOCIATION OF AMERICA

The Petroleum Marketers Association of America (PMAA) represents the independent petroleum marketers who are members of these state and regional trade associations:

Alabama Oilmen's Association
Arizona Petroleum Marketers Association
Arkansas Oil Marketers Association, Inc.
California Independent Oil Marketers Association
Colorado Petroleum Marketers Association
Independent Connecticut Petroleum Association
Florida Petroleum Marketers Association
Georgia Oilmen's Association
Idaho Oil Marketers Association
Illinois Petroleum Marketers Association
Indiana Oil Marketers Association, Inc.
Petroleum Marketers of Iowa
Kansas Oil Marketers Association
Kentucky Petroleum Marketers Association
Louisiana Oil Marketers Association
Maine Oil Dealers Association
Michigan Petroleum Association
Mid-Atlantic Petroleum Distributors Association, Inc.
Mississippi Petroleum Marketers Association
Missouri Oil Jobbers Association
Montana Petroleum Marketers Association
Nebraska Petroleum Marketers, Inc.
Nevada Petroleum Marketers Association
Independent Oilmen's Association of New England
Fuel Merchants Association of New Jersey
New Mexico Petroleum Marketers Association
Empire State Petroleum Association
North Carolina Petroleum Marketers Association
Northwest Petroleum Association
Ohio Petroleum Marketers Association
Oklahoma Oil Marketers Association
Oregon Petroleum Marketers Association
Pennsylvania Petroleum Association, Inc.
South Carolina Oil Jobbers Association
South Dakota Petroleum Marketers Association
Tennessee Oil Marketers Association
Texas Oil Marketers Association
Virginia Petroleum Jobbers Association
Washington Oil Marketers Association
Western Petroleum Marketers Association
West Virginia Petroleum Marketers Association
Oil Jobbers of Wisconsin, Inc.
Wyoming Petroleum Marketers Association

The Petroleum Marketers Association of America is located at 1120 Vermont Avenue, N.W., Suite 1130, Washington, D.C. 20005. Telephone: (202) 331-1198. Fax: (202) 467-6330

## PETROLEUM MARKETERS ASSOCIATION OF AMERICA
## STATISTICAL QUICK REFERENCE SHEET
## 1987 DATA

| | |
|---|---|
| NUMBER OF MARKETERS REPRESENTED | 10,481 |
| TOTAL VOLUME OF REFINED PRODUCTS SOLD | 92 BILLION GALLONS |
| EMPLOYMENT | 241,902 |
| Full Time Employment | 201,262 |
| Part Time Employment | 40,640 |
| PERCENT OF U.S. TOTAL REFINED PRODUCTS | 36.0% |
| Motor Gasoline | 54.8% |
| Distillate Fuel Oil | 58.5% |

| NUMBER OF MARKETERS BY PRODUCT | NUMBER | % of TOTAL |
|---|---|---|
| Heating Fuels Only | 1,362 | 13% |
| Motor Fuels Only | 3,878 | 37% |
| Both Heating & Motor Fuels | 5,241 | 50% |
| TOTAL | 10,481 | 100% |

| | |
|---|---|
| TOTAL MOTOR FUELS RETAIL FACILITIES SUPPLIED | 94,329 |
| TOTAL MOTOR FUELS RETAIL FACILITIES OWNED | 41,976 |
| TOTAL NUMBER OF CONVENIENCE STORES OWNED | 18,875 |

| HEATING FUELS DISTRIBUTION CHANNELS | % of PRODUCT |
|---|---|
| Residential | 75% |
| Commercial | 14% |
| Other Fuel Oil Marketers | 6% |
| Industrial | 4% |
| Other | 1% |

| MOTOR FUELS DISTRIBUTION CHANNELS | % of PRODUCT |
|---|---|
| Direct Owned & Operated | 36% |
| Lessee Dealer | 14% |
| Open Dealer | 22% |
| Bulk End Users | 23% |
| Others | 5% |

| | |
|---|---|
| BULK STORAGE CAPACITY | 1.7 BILLION GALLONS |
| NUMBER OF BULK STORAGE FACILITIES | 10,500 |

Source: Petroleum Marketers Association of America

Good morning. My name is Bruce Chiles. I am President of Chiles Oil Company, a motor fuel marketing company located in Pulaski, Tennessee. I am here today in my capacity as President of the Petroleum Marketers Association of America (PMAA), a federation of 43 state and regional trade associations representing more than 10,000 independent petroleum marketers throughout the United States. These marketers sell approximately 50 percent of the gasoline, 75 percent of the home heating oil and 60 percent of the diesel fuel sold in this country. Eighty-nine percent of PMAA's membership is classified as small businesses under size categories established by the Small Business Administration.

PMAA appreciates this opportunity to express its views on S. 1630, the "Clean Air Restoration and Standards Attainment Act of 1989" and on S. 1490, the "Clean Air Act Amendments of 1989", the President's Clean Air proposals.

Our comments today will focus on five key areas of both bills relating to refueling emissions of automobiles, oxygenated fuels mandates, and requirements relating to the burning of so called "clean fuels", desulfurization of diesel fuel, misfueling, and gasoline volatility.

PMAA members share the concerns of the subcommittee about air quality and agree that substantial revisions need to be made in the Clean Air Act to bring about needed improvements. PMAA supports many of the goals of S. 1630. Among other things, we support the idea of extending the Clean Air Act deadline to allow the many areas facing short-term nonattainment sanctions to take steps to improve air quality. We also support the reasonable approach of allowing different nonattainment areas to reach attainment on different schedules depending upon the severity of their air quality problems. We strongly support the concept of mandatory motor vehicle inspection and maintenance programs for highly populated areas. The on-board refueling canister on motor vehicles is a requirement that we also strongly endorse. And, we support the idea of requiring the states to submit new State Implementation Plans (SIPs) designed to achieve attainment by the prescribed deadlines.

For the most part, petroleum marketers operate family businesses. Many companies have been in business for 50 years or more and are in their second, third, or even fourth generation of family leadership.

As a result, there is a strong sense of continuity among petroleum marketers and a desire to perpetuate a sound social, economic and ecological environment in which they and their heirs will be able to operate well into the future.

Because of this, the PMAA welcomes and supports efforts to amend the Clean Air Act. We find it appalling that more than 100 areas of the country fail to meet the existing standard for ozone and that another 44 areas are unable to meet the carbon monoxide standard. What is perhaps mroe troubling, however, is the fact that the number of areas on this list is growing rather than shrinking. We, however, take solace in the fact that many of these areas are only slightly over the standard for only a very small number of days per year.

PMAA commends the President and the key leaders in Congress for their willingness to move forward on these critical issues. To the extent we disagree with specific recommendations being made or perfer alternative solutions to the problems presented, it is our means of trying to be a constructive part of the overall policy debate on this matter.

No industry, nor any segment of an industry can avoid its responsibilities in cleaning up the environment. Likewise, no industry or segment thereof should be asked to bear a disproportionate share of the burden.

With this in mind, PMAA makes the following observations concerning different issues which make up the Clean Air debate.

## PMAA Opposes the Stage II Provisions in S. 1630 and S. 1490

Ozone formation in the atmosphere is a complex process involving a number of different pollutants and conditions. It is generally agreed that hydrocarbons in the atmosphere are a major precurser to ozone, and that gasoline refueling vapors are a source of hydrocarbons. However, refueling vapor losses contribute only a very small portion -- EPA estimates it at approximately two percent -- of overall hydrocarbon emissions into the atmosphere.

For over a decade, EPA has been considering the issuance of final regulations to reduce emissions of gasoline vapors during refueling, with three major options under study: (1) reducing gasoline volatility, (2) capturing the gasoline vapors in a container "on-board" the motor vehicle, and (3) capturing the gasoline vapors as they exit from the fuel tank neck and sending them to the service station underground storage tank (stage II vapor recovery). The fact that refueling vapor losses are such a relatively small factor in overall hydrocarbon emissions is one reason why the EPA has been reluctant to act in a timely fashion, since control of refueling losses entails costs anywhere between several hundred million to several billion dollars. However, on August 19, 1987, EPA issued proposed regulations (52 FR 31162) requiring reductions in gasoline volatility and on-board canisters nationwide. EPA rejected the option of mandatory stage II vapor recovery. PMAA strongly supported EPA's decision not to require stage II controls.

On March 22, 1989, the Agency issued final regulations to control gasoline volatility, but did not further address either stage II vapor recovery or on-board controls. Although EPA was ready to issue regulations relating to refueling emissions as long as eight months ago, the regulations languished at the Office of Management and Budget (OMB) as questions about the canister's safety and cost effectiveness resurfaced. We understand the Department of Transportation has completed an additional study of the safety issue at OMB's request. We believe the safety concerns are unjustified and are in large part motivated by efforts to derail the issuance of the on-board canister regulations. We also believe that EPA's regulations requiring on-board canisters fully address and resolve any outstanding safety issues. These regulations should be released without any further delay. We will comment more fully on the safety issue later.

PMAA members are extremely concerned with the requirement contained in S. 1630 of mandatory stage II controls in those areas classified as having serious, severe, or extreme nonattainment problems. We are even more concerned that Stage II could be required in those areas classified as "moderate" with design values between .12 - .14 ppm.

This requirement is imposed, in addition to nationwide on-board refueling canisters, apparently because stage II controls are viewed as a cost-effective interim measure that can be quickly implemented while the vehicle fleet is in the process of being equipped with on-board canisters. However, stage II vapor recovery is not a cost effective way to reduce hydrocarbon emissions, as both data compiled by the Environmental Protection Agency (EPA) and the petroleum industry demonstrate. Neither can stage II be quickly implemented. Furthermore, the high level of consumer inconvenience and enforcement problems presented by stage II systems make this technology a poor candidate as an effective control measure, either on its own or as an interim measure.

The stage II requirements of both bills are technologically redundant, and as such will force many petroleum marketers to spend thousands of dollars per service station for equipment that will become unnecessary once on-board canisters are fully in place. PMAA questions the basic fairness of this requirement, particularly at a time when marketers are already spending their limited resources on underground storage tank upgrades and replacements to improve the quality of the environment. Accordingly, we urge that the stage II vapor recovery requirement be deleted from these bills when they go to markup. The justification for this recommendation follows:

o Stage II Controls Are Not Cost Effective

In the course of issuing its proposal to require on-board canisters nationwide, EPA has studied the cost effectiveness of stage II vapor recovery controls both as an interim measure while the motor vehicle is becoming equipped with on-board canisters and as a stand-alone technology for recovering gasoline refueling emissions. In both instances, EPA rejected stage II as an appropriate measure for capturing gasoline refueling emissions for many reasons, including its cost effectiveness.

First, with respect to the question of whether stage II vapor recovery is a cost effective interim measure, EPA's analyses have concluded that it is cost effective only where it is already in place, or where it is in the process of being implemented. According to the preamble of the proposed rulemaking, the Agency found that "the value and reasonableness of stage II as an interim measure was largely dependent upon the speed with which stage II could be implemented in practice. The longer it takes, the more stage II implementation would overlap that of on-board, and thus stage II as an interim measure would result in rapidly diminishing benefits at essentially constant cost." (52 FR 31182) It is not generally feasible "where regulations would have to be developed and approved under state procedures, and then go through the EPA review and approval process prior to implementation." (52 FR 31182) Such procedural hurdles, coupled with other routine delays related to contractor availability, etc., which will be discussed in more detail later, inevitably result in an implementation schedule for stage II that overlaps that of the on-board refueling canister. EPA's analysis is supported by studies conducted by the American Petroleum Institute (API) which demonstrate that installation of stage II can take as long as seven years.

With respect to the question of whether stage II is cost effective as a stand-alone, substitute technology for the on-board canister, EPA again rejected stage II.

According to the preamble of EPA's proposed rulemaking, when costs related to consumer inconvenience are taken into account, the cost effectiveness of stage II ranges from $2800 to $3600 per ton of hydrocarbon reduced. This range of cost takes into account such variables as the number of nozzles per station, different levels of enforcement, different volumes of gasoline throughput and consumer inconvenience. EPA calculates the average inconvenience cost to consumers, or the amount consumers will pay to avoid using stage II equipment, to be approximately ten cents per refueling event. Just for purposes of comparison, the cost effectiveness of an on-board program ranges from negative to $1500 per ton when the health benefits that will accrue in attainment areas from reductions in hydrocarbon, benzene and gasoline vapors are taken into account, according to EPA's proposal. (52 FR 31182) Additionally, when the fuel savings from running losses are taken into consideration, the comparative cost effectiveness of the onboard canister is significantly more favorable than was estimated in EPA's initial proposal.

- Stage II is Expensive

Stage II systems are also extremely costly. According to the most recent industry cost estimates based upon actual costs incurred in St. Louis in 1987, the capital costs to install stage II range from approximately $16,000 for a six-hose station to $31,000 for an 18-hose facility, to nearly $60,000 for a 36-hose outlet. These costs were reduced only slightly when the installation of stage II equipment occurred in conjunction with underground tank replacements or upgrades.

In addition to the capital costs related to installation are the annual maintenance costs. Marketers who currently utilize stage II have told PMAA that annual maintenance costs are approximately $1000 per hose. Included in these figures are the costs for rebuilt nozzles, new hoses, spouts, swivels, faceplates, bellows and hose retractors, as well as labor costs and yearly permit fees.

According to the data in the 1988 PMAA Marketer Profile Study, which is based on 1987 data, the typical gasoline marketer owns approximately 8 retail outlets. The average after tax profit for the average marketer in 1987 was approximately $66,500. The cost of installing stage II equipment would therefore literally wipe out years of an independent gasoline marketer's profits. The significant cost burden imposed by stage II controls when coupled with requirements to upgrade or replace underground storage tanks could drive many independent marketers to financial failure.

- Implementation of Stage II is a Slow Process

As mentioned previously, EPA's estimates that stage II is not a cost effective interim measure rest largely upon a realistic analysis of the time period required to install stage II equipment. In addition to the procedural delays relating to state adoption of regulations and EPA approval, other significant hurdles to quick implementation exist. For example, the problem of developing sufficient contractor expertise for the installation and maintenance of stage II equipment in the nonattainment areas covered by S. 1630 and S. 1490 would be significant. And, specialized material suppliers will be called upon to deliver materials and quantities of equipment and associated hardware not previously demanded. This will add substantially to delays in implementing any stage II program.

The timing for installation is a critical factor because it is the only factor which would favor stage II over on-board controls as a control strategy for refueling emissions. But, because of the problems cited above, stage II cannot be implemented quickly, thus causing independent small business marketers to spend thousands of dollars on equipment which will quickly be outdated. PMAA sees no equity in this approach.

- Consumers Find Stage II Equipment Difficult to Use

Consumer acceptance of stage II vapor recovery systems has been poor. In its proposed rulemaking, EPA recognized this fact when it assigned an inconvenience cost of ten cents per refueling event in recognition of the amount consumers would be willing to pay to avoid using stage II equipment. Consumers complain that stage II equipment spills gasoline on their cars and clothing and on the pavement. They find the equipment unmanageable and awkward to deal with. These problems result in customer "avoidance" or actions that defeat the proper functioning of the equipment. Customers who are unable or unwilling to deal with stage II equipment have learned to use the vapor recovery nozzle in a way that makes it easier to pump gasoline into their vehicles, but which defeats the proper operation of the vapor equipment in capturing refueling emissions. For example many customers do not wait the requisite ten seconds after the pump shuts off to remove the nozzle. Other customers similarly defeat the operation of the stage II system by trying to "top off" the fuel tanks in their vehicles after the pump shuts off. Such actions prevent stage II equipment from working properly. Customer avoidance, particularly when combined with equipment defects, demonstrate that stage II vapor recovery controls do not work to expected efficiencies. Thus, stage II is unlikely to achieve the emissions reductions which may be expected.

An EPA study of consumer habits in Washington, D.C. revealed that motorists will wait in line for full-service rather than attempt a self-service refuel with a stage II nozzle. Not only the elderly and the disabled, but the able-bodied as well, suffer higher costs as a result of stage II equipment if they must purchase their gasoline at full-service rather than at self-service locations.

Air quality will not be improved by a system that is so difficult for even the average consumer to use that he or she devises methods of sabotage that defeat the proper operation of the system. Neither will air quality be improved if unhappy consumers find that they can drive from areas that require stage II to those without stage II controls to avoid the inconvenience of purchasing their gasoline through the troublesome vapor recovery equipment.

For instance, dissatisfied customers in the District of Columbia easily can travel to nearby counties in Virginia and Maryland to avoid stage II. In California, customers are able to cross state lines to purchase gasoline at outlets that are not required to comply with stage II regulations. Not only does this customer migration exacerbate air quality problems in and between nonattainment and attainment areas, but it also causes severe competitive problems between those retail outlets that are required to install stage II equipment, and those that are not. Requiring stage II in severe nonattainment areas will thus result in the export of hydrocarbon emissions to other areas and subject retail outlets equipped with expensive stage II systems to suffer volume losses and competitive pressures from outlets not so equipped.

o Stage II Poses Severe Enforcement Problems

Stage II systems require a significant level of maintenance to perform adequately. Inappropriate handling of troublesome stage II equipment often renders it ineffective. Rubber boots, for example, are easily cut on license plates or through mishandling. Equipment subject to self-service use is particularly prone to damage. In the past, marketers have reported to PMAA that customers throw the nozzles, take knives and cut them off, steal them, or shove them into card readers to vent their frustration. With some of the second generation equipment, consumer acceptance has improved; however, this equipment costs nearly $1,000 per nozzle. While changes in second generation equipment have improved the operation of the nozzle, the failure rate of hoses has increased by 70% according to marketers using the equipment.

Because of the unreliability of the equipment, an extensive enforcement effort still has to be made to ensure that the equipment is kept in good working order. However, even an annual inspection program can only be expected to yield an in-use efficiency rate for stage II at 82 percent, according to EPA. And less frequent inspection rates yield concomitantly lower efficiencies.

PMAA questions whether state and local governments will be willing or able to shoulder the costs of the type of extensive enforcement program required to maintain the equipment properly. On the other hand, as the nature of the equipment requires constant vigilance, frequent inspections may turn independent gasoline marketers, who are making a good faith effort to comply with stage II regulations, into constant violators. Thus, the independent gasoline marketer is faced with large and continuous maintenance costs and the choice of whether it is worth incurring such costs if the equipment can be easily rendered ineffective, thereby exposing him or her to liability for violation of the regulations. In the San Diego, CA area, defective equipment, or any problem that impairs the effective operation of the system, is subject to a $500 fine.

Another enforcement problem related to stage II equipment concerns the provision in S. 1630 which exempts all stations with monthly volumes under 20,000 gallons. S. 1490 provides an exemption for small stations (discretion to the Administrator is provided). PMAA is pleased that the legislation recognizes the extraordinary impact these requirements would have on small marketers and has thus proposed a method to deal with such problems.

However, such exemptions may, in fact, worsen the enforcement problems. For example, on what basis are volumes going to be checked to determine if a station is under or over the exemption level? For what period of time? Who is going to check? What means are going to be put in place to determine if a station which is originally exempt later exceeds the volumetric level? Will a station that initially exceeds the level but later loses volume and falls under the exemption level have to keep the stage II equipment operational? What system(s) will be in place to prevent abuse of this approach? These are all matters which will relate directly to enforcement particularly given the tremendous negative attitude consumers have toward stage II equipment and their proven willingness to seek out stations without such equipment.

o On-Board Canister Systems are Safe

PMAA supports Section 203 of S. 1630 requiring on-board carbon canisters on new cars. We believe this is the most cost effective, efficient and easily enforceable means of dealing with the refueling emission problem. Moreover, it is estimated that within 10 years, on-board systems will cover 87 percent of the total miles travelled by this country's automobile fleet.

In the last two years, questions about the safety of on-board canisters have been raised, but not supported by engineering studies or empirical data. In its simplest form, the refueling canister involves enlarging or increasing three components which are already on the car. No new concepts or materials are needed. It is difficult to discern any increase in risk inherent in the progression from the current evaporative emissions control systems to the refueling emissions control system. A much greater advance in technology was involved in applying the first evaporative emission controls to uncontrolled vehicles in the early 1970's than in the current proposal to modify the existing evaporative systems.

Recently Arthur D. Little, Inc. (ADL) issued a final draft report to the Department of Transportation on the safety issues associated with on-board vapor recovery systems. Although the ADL report states "there is adequate evidence to conclude that there are potential safety risks associated with on-board systems," they are unable to support this conclusion with convincing data. They claim that these systems are "at too early a stage of development to adequately and completely assess risk," virtually disregarding the fact that the American Petroleum Institute (API) and the Environmental Protection Agency (EPA) have successfully designed, installed and tested on-board refueling systems on various late model cars. Moreover, many of the statements made in the report are so general that they could apply to any change in any component in the vehicle system.

PMAA has many concerns with the ADL report, but we would defer to the comments and expertise of the API on this issue. However, it seems difficult to identify a safety concern that could not be resolved in the lead time provided by S. 1630.

## Oxygenated Fuels Mandates

Section 218 (1)(2) of S. 1630 requires the use of oxygenated gasoline blends with an average oxygen content of 3.1 percent in serious and severe carbon monoxide (CO) nonattainment areas from November to March each year. It would also establish an oxygen trading system to help meet this average. PMAA opposes this requirement and questions the need for a federal mandate in this area.

As a practical matter carbon monoxide emissions from automobiles are improving as newer cars come on to the market. Many of these cars have advanced emission systems, particularly those with adaptive learning systems, which do not emit significant quantities of carbon monoxide in the first place. Studies of post-1981 cars show that 80 percent of the carbon monoxide reductions that can be achieved can be obtained with gasoline containing 2 percent oxygen.

By requiring a 3.1 percent average oxygenate in gasoline, S. 1630 is essentially mandating the use of ethanol to meet this requirement. Currently there are two oxygenated blends on the market -- ethanol and methyl tertiary butyl ether (MTBE). MTBE can only be blended up to 2.7 percent by weight and a maximum of 15 percent by volume.

Theoretically MTBE could continue to be used because of the oxygen credit trading program provided for in the bill. However, in practical application, the economics will not justify the use of MTBE.

This is because ethanol, when blended with gasoline, is highly subsidized. MTBE has no similar subsidy and thus would be unable to compete economically.

Establishing a de facto ethanol mandate is probably not wise public policy under any circumstances. The current ethanol market is dominated by a single company which reportedly controls over half the ethanol production in this country. In addition, in 1988, federal tax subsidies for ethanol blends totalled $500 million and state tax subsidies cost an additional $200 million.

There are numerous other reasons to oppose ethanol mandates:

- Increased production of ethanol for blending with motor fuels will increase consumer food bills as the prices of grain and corn rise;
- Requiring a 3.1 percent average will impede the development of other promising oxygenates such as ETBE which can only be blended up to 2 percent oxygen under current EPA regulations;
- Major and costly changes will be needed in the motor fuels distribution system to accommodate ethanol blends;
- A one psi volatility waiver is provided for ethanol blends, thus putting this program in conflict with other provisions of S. 1630 which seeks to decrease evaporative emissions.
- An oxygen credit trading system represents a marketer's nightmare and a bureaucrat's dream. The oil industry's experience with the crude oil entitlement program, which involved only a few hundred refiners, is too recent to have any faith in a trading system for oxygenates which could involve thousands of blenders and marketers. Furthermore, testing procedures for oxygen are complex and expensive. At what level would the tests be performed? Would not individual truck tank loads (indeed even the individual compartments within the tanks) have to be tested for oxygen content? Beyond the questions relating to the actual testing, questions abound as to how the actual credit program would work. Who would grant the credit? Who benefits? The retailer? The wholesaler? The refiner? How will fraud and abuse be monitored?

For of all these reasons, PMAA urges that no federal minimum oxygen content standard be set. We are particularly pleased to note that S. 1490 establishes no such oxygen content standard. Several local jurisdictions have already adopted oxygen mandates and it is interesting to note that high oxygen content requirements have been rejected by these jurisdictions. Denver, one of the nation's most serious carbon monoxide nonattainment areas, decided to adopt a 2.0 percent requirement. This allows for a choice by both suppliers and consumers of the best fuel available at the lowest possible cost.

## Alternative Fuels

We are pleased that S. 1630 does not seek to mandate alternative fuels or alternative fuel vehicles. Such mandates represent unnecessary interference in the marketplace. We greatly prefer the provisions in S. 1630 which require the creation of clean fuel and clean fueled vehicle standards to the arbitrary approach of S. 1490, which mandates the sale of alternative fuels and alternative fuel vehicles. While PMAA supports the concept of alternative fuel development, we believe it should be done without federal mandate or government subsidy. However, in the context of the pending legislation, we are concerned that the alternative fuel most often discussed is methanol.

We do not believe methanol can offer the type of benefits touted by many of its advocates or envisioned by this legislation. Moreover, methanol presents an entire series of other problems as well.

A recent study done for California's South Coast Air Quality Management District by Carnegie Mellon University shows that if 100 percent of the vehicle fleet is converted to neat methanol (M 100), ozone levels would be reduced by only 15 percent. If M85 were used as part of a flexible fuel vehicle program, there would be no measurable improvement over current conditions. In a March 1989 report, Sierra Research concluded that "methanol offers no clear advantage over gasoline in reducing vehicle emission levels."

The specific problems that methanol presents are as follows:

- Methanol is extremely toxic when swallowed or absorbed through the skin. It is odorless, colorless and tasteless, mixing easily with water. These characteristics are likely to compound the problems associated with a spill or leak;

- Methanol produces formaldehyde at a rate of 5 to 10 times the formaldehyde emissions from gasoline. Formaldehyde is a highly reactive ozone precursor. PMAA is currently unaware of any reliable formaldehyde emission control technology.

- The costs of converting the motor fuels distribution system to methanol would be enormous. This cost relates both to the toxicity of methanol as well as to its energy content. Recognizing the toxicity problem, a House bill, H.R. 2323, requires the installation of underground storage tanks that are methanol compatible in severe and extreme non-attainment areas, a provision PMAA strongly opposes because of the additional costs imposed on a marketer to meet this requirement. This provision would require double walled tanks at a minimum, which cost roughly twice that of single walled tanks. This requirement is particularly burdensome to marketers in view of the already considerable financial expenditures they must make to comply with existing underground tank standards now imposed by EPA.

- Because gasoline has an energy content 1.8 times the energy value of methanol, conversion to methanol would require an expansion of the existing fuel distribution system by 80 percent. This means more tanker trucks on the highway since they would have to make 80 percent more deliveries. Fuel tanks on individual vehicles would either have to be enlarged or the number of fuelings would have to increase by 80 percent.

- Reliance on methanol does nothing to improve our eneregy security, since the most economical feedstock for methanol would be foreign natural gas. Three-fourths of the world's surplus natural gas reserves are located in the Middle East and the Soviet Union.

For all of these reasons, PMAA would urge that the mandated alternative fuel provisions of S. 1490 be rejected.

## RVP Requirements

PMAA is supportive of provisions in both S. 1630 and S. 1490 to lower the Reid vapor pressure (RVP) of gasoline. We believe a reduction in RVP will significantly reduce the ozone problem as well as the number of areas in ozone non-attainment. This, in turn, should lessen the need for expensive, ineffective technologies such as stage II vapor recovery.

We are concerned that S. 1630 mandates 9 psi RVP during summer months only for Class C areas as defined by the American Society of Testing Materials (ASTM). During the Summer of 1989 EPA, using ASTM defined areas, reduced RVP of gasoline nationwide. Because the ASTM defined areas do not necessarily follow normal distribution patterns, there were spot shortages of gasoline. Marketers who normally had to haul product 30 to 35 miles were now faced with having to travel 2 to 4 times that distance to obtain product that met the RVP requirements for their market areas.

To prevent future recurrences of this problem, PMAA would recommend a single national RVP standard of 9 psi. In the alternative, if such a national standard is not possible, PMAA would recommend that the Administrator have discretion to redraw RVP boundaries so as to prevent or alleviate any supply disruptions which might be occurring.

## Misfueling

For 12 years, petroleum marketers have been concerned with the provisions of the Clean Air Act which imposed penalties for consumer misfueling - putting leaded gasoline into a car requiring unleaded - on the owner or operator of the service station. While this penalty may have been appropriate if the station owner or operator actually pumped the leaded gasoline into the car, it was clearly inappropriate when a consumer intentionally tampered with the fill pipe and used a self service station to refuel his car.

PMAA is pleased that Section 219(g) of S. 1630 provides that "no person" shall introduce leaded gasoline in a car requiring unleaded fuel. We are equally pleased that the civil penalty section specifies that "any person" who violates this section is subject to penalty. PMAA interprets this provision to mean that the liability provisions have been extended to include a motorist who knowingly introduces leaded gasoline into a vehicle requiring unleaded gasoline.

The penalty for this violation is increased from $10,000 to $25,000. PMAA would urge that the Administrator be allowed discretion in applying this penalty so as not to place undue hardship on small dealers who may have unconsciously committed a violation by having a worn nozzle on an unleaded pump.

## Diesel Fuel Desulfurization

PMAA notes that the misfueling provisions of S. 1630 also apply to putting diesel fuel with a sulfur content in excess of .05 percent in a motor vehicle. This provision relates back to section 215(i) of S. 1630, which mandates that all motor vehicle diesel fuel contain a sulfur content of 0.05 by weight and a cetane minimum index of 40 by October 1, 1993. Furthermore, the Administrator is required to prescribe regulations that mandate the dyeing and segregation of diesel fuel not used for motor vehicles. This requirement is similar to a currently pending regulatory proposal by EPA which implements an agreement between the API and diesel engine manufacturers.

PMAA supports the reduction in the sulfur content not only of motor vehicle diesel fuel, but also of diesel fuel used for other purposes including home heating oil. PMAA believes the reduction in sulfur content in home heating oil can have significant benefits not only from an environmental standpoint, but also in the useful life of furnaces and burners. PMAA would therefore support a single sulfur content for all distillate fuels, not just motor vehicle diesel fuel. Such a single standard should be implemented in a sufficient time frame so as to avoid any supply availability problems for diesel fuel or home heating oil.

The benefits of such an approach are numerous:

- Overall sulfur emissions would be reduced for all distillate fuels;
- Diesel engines as well as heating oil furnaces and burners would have a longer useful life; and
- Dyeing and segregated storage would be avoided.

This final point is critical. While the pending EPA proposal carefully examined the impacts of a low sulfur diesel fuel standard on refineries, pipelines and terminals, no similar examination was performed for the impacts on downstream marketers including diesel fuel wholesalers, retailers, and heating oil wholesalers and retailers. For example, under the current proposal, many marketers will be faced with the equally unpleasant alternatives of either increasing current storage capacity or ceasing sales of one of the two products. This could have dramatic impacts not only on marketers, but also on diesel fuel and home heating oil distribution in rural areas of the country.

Maintaining a single, low sulfur distillate fuel would deal with each of these problems.

## Summary and Conclusions

PMAA commends the Subcommittee Chairman for his initiative in pursuing this legislation and we support many of the concepts embodied in the bill including stronger vehicle inspection programs, on-board control technology for dealing with refueling emissions and allowing staggered deadlines by which different nonattainment areas must come into compliance.

However, we are very concerned about and therefore must oppose, several other provisions including stage II vapor recovery in all but moderate nonattainment areas, and the *de facto* ethanol mandates as part of the carbon monoxide reduction strategy.

As small, and for the most part, family operated businesses, PMAA members recognize the necessity in taking action to address clean air issues. We hope not only that our sons and daughters are able to carry on our businesses, but also that they can do so in an environment that is safe for their children and their children's children. Therefore, let me assure you that we hope to contribute to the process by working with the Subcommittee on potential solutions.

I appreciate the opportunity to be here this morning and will be happy to answer any questions you may have.

# TESTIMONY

OF

LARRY FELDCAMP

CHAIRMAN

TEXAS OZONE TASK FORCE

ON

S. 1630

BEFORE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

U.S. SENATE

SEPTEMBER 27, 1989

**TEXAS
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TASK
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## TESTIMONY ON S. 1630

My name is Larry Feldcamp. I am testifying as Chairman of the Texas Ozone Task Force. With me is Allison Pierce, Vice Chairman of the Task Force and Director of the Harris County Pollution Control Department. The Texas Ozone Task Force, a public-private partnership, includes as its members the Greater Houston Chamber of Commerce, the City of Houston, Harris County, the Houston/Galveston Area Council, the Texas Chemical Council, the Texas Mid-Continent Oil and Gas Association, the Texas Oil Marketers Association, and the Greater San Antonio Chamber of Commerce. The Texas Air Control Board and the Houston Regional Monitoring Corporation serve on an advisory capacity.

Based on our experience in Houston, no credible scientist can say when the ozone standard can be met. No one in Houston wants to violate the ozone standard, but despite more than 15 years of effort exacting hundreds of thousands of tons of volatile organic compounds emission reductions, ambient ozone concentrations have not responded with the projected results. We are proud of the aggressive efforts we have made in attacking the ozone problem. There are virtually no other areas of the country, with the possible exception of Southern California, that are as rigorously regulated. No one can realistically claim that Houston hasn't made the effort; there are few control options left.

Because the Houston area has been confronted with ongoing frustrations related to efforts to attain the ozone standard, the Texas Ozone Task Force has attempted to analyze legislative proposals with the realization that --- despite undertaking all of the efforts these proposals require --- many areas will still fail to attain the standard. On balance, based on this analysis, the Texas Ozone Task Force believes that S. 1630 -- while it offers a framework that can be modified for progress on the enduring and complicated problems of ozone nonattainment -- need to be changed to assure that this progress is not seriously adverse to the future of the American economy and American competitiveness.

We believe that future ozone nonattainment programs must build on past understandings. Our experience has shown that our understanding of ozone nonattainment has changed constantly over the past 15 years. We know more today about emissions and

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meteorology and modeling than we knew in 1982 when we last developed implementation plans. But our knowledge is still changing. This year we have learned that the magnitude and nature of mobile source emissions is different than we have previously thought. More is being learned about stationary source emissions. While all of this information is useful, unless far more is done to research the nature of ozone formation, we will be constrained to follow a control strategy that has thus far failed.

This presentation is necessarily constrained by the time available to analyze the bill. Consequently, there may be other comments that we will provide after the hearing. These comments will address a number of key issues. The Texas Ozone Task Force has tried to work with the Committee on these complicated issues. We believe our experience can assist in formulating solutions to the ozone question which can benefit the environment and the nation. We offer our assistance to the Committee and its staff as further deliberations occur.

Initially, however, this testimony will address the areas of the bill which are of greatest concern to the Texas Ozone Task Force. These include the failure of the bill to address the underlying theories on ozone formation and the provisions -- offsets and netting -- that effect the parts of the current Clean Air Act which allow --- even though under very rigorous constraints --- the development and modernization of the national industrial base.

S. 1630 needs to include a study of the role of VOC and NOx on ozone formation. The Houston experience with the current ozone control strategy suggests that it is seriously flawed. In part, it fails to account for ozone exceedances which result from situations other than the classic ozone formation assumptions. In part, it has failed to produce ozone reductions in spite of significant VOC reductions even under the classic ozone formation situations. The Texas Ozone Task Force supports the inclusion of a study in this bill similar to the study in S. 1490, but it believes that the minimum elements should be expanded considerably.

With regard to offsets the bill alters various definitions to require small sources to undergo both LAER reviews and offsets. It also increases offset requirements from essentially one to one to a ratio of two to one. This will effectively result in a construction ban. It is our view that offset ratios in excess of 1.2 to one, given all the other requirements of the bill, would result in termination of new construction.

This bill includes several elements that directly change the emissions offsets options available to new and modified sources: new sources of smaller size will be subject to new source review, offsets will be increased, RACT will be applied to virtually all sources, area sources will be controlled. Taken in combination, these various steps will essentially eliminate any excess pool of emissions that can be used for offsets.

These steps are significant with regard to the effect they can have in reducing the nation's ability to site new manufacturing operations -- a concern which has not been widely analyzed. But, they can be of even more consequence with regard to existing operations depending on how netting is altered. The bill prohibits the option of "netting" for existing source modernization.

It is time to realize that the future is the issue -- not the past. Companies often use -- and in the future will be more reliant on -- netting to make modernization changes at facilities which might improve air quality, plant efficiency, and production output -- changes essential to remaining competitive nationally and internationally, essential in some cases to meet new environmental requirements.

Provisions in the bill apply the new source offset requirements to existing source modernization. Because other provisions of the bill would reduce available emissions that could be used for such offsets, modernizing would not be feasible or could only occur with capacity loss. For industries that must retool on a recurring basis the effects would be more significant and felt much earlier.

Congress must recognize that its decisions in this crucial area are not bounded by the best choices to pursue attainment of ambient air quality standards. These choices may well define the industrial siting policy for the nation well into the next century and, by doing so, determine the position of this country in international competition.

Following are a number of other issues that the Texas Ozone Task Force also believes should be addressed. First, the general approach taken in the bill to address nonattainment is sound. It places significant emphasis on taking initial regulatory steps during the short term while obtaining the information necessary to make future steps. However, it will be essential that the future steps be based on a well developed inventory, modeling effort and monitoring analysis. The initial regulatory steps required in this bill will largely consume all known reasonable controls and may result in the requirement of controls that ought to be more thoroughly understood.

Second, the deadlines in the bill need to be more carefully considered. While some may question the need for a deadline perceived to be as distant as 2010 (as in S. 1490) for areas like Houston, it is important to recognize that such a deadline applies primarily to areas (1) which have already exhausted most known regulatory options and (2) which, after the implementation of the short term regulatory steps required in this bill, will largely be confronted with finding reductions that will come from options necessitating considerable advanced planning and implementation time such as mass transit improvements and other lifestyle related controls. Consequently, these areas need to have adequate time to institute these planning efforts without confronting the threat of sanctions or being compelled to adopt regulatory options that are less cost effective or are socially disruptive.

Similarly, while the concept of allowing areas which fail to meet the ambient standard to move into the next category is philosophically sound, the Congress needs to consider whether it believes those areas which fail to meet the standard by some small amount should be treated the same as areas which miss by a large amount. Based on experience with the current control strategy, the perception of the Texas Ozone Task Force is that most major metropolitan area will continue to fail to meet the standard after all identifiable controls are implemented, including many lifestyle related controls. Consequently, Congress needs to consider whether it wants areas which may -- due to variations in weather or similar situations -- fail to meet the standard at concentrations of 0.13 ppm to be treated the same way as Los Angeles.

Third, regarding the percentage reductions targets, this bill needs to recognize the constraints of technical feasibility by adding a test for feasibility when future regulations are developed. A minimum target of a 4 percent/year reduction in VOC emissions will be far more difficult to attain than many will contend. Adding a technical feasibility test is an essential concept if this approach is to be realistically acceptable. This is particularly important given the need to address lifestyle related issues, the importance attached to transportation controls, and the extensive initial controls required.

Fourth, in establishing the emission reduction requirements for controls, the bill excludes from the target percentage emission reductions from the RVP requirement included in the bill. This is inappropriate. Each nonattainment area's emissions are the result of a different mix of emission sources. Each area has imposed some different set of existing regulations. If areas are now to be subjected to the same percentage reduction requirement over the next 5 years, they should not have arbitrarily selected control options excluded from the mix. In particular, excluding emissions reductions from the mobile source pool --- which for most areas is the predominant emission source --- compels short term regulatory choices which could be unnecessary in some cases and could be a cost ineffective choice compared to an alternative that might be imposed at a later date. The appropriate approach would be to base the emission reduction targets on all emissions sources to assure that the most cost effective selections are made.

Fifth, sanctions are essentially directed at events within the control of the regulatory process such as development of plans and implementation of regulations. Sanctions should be made more discretionary. While some will contend that sanctions should be mandatory, experience has indicated that severe mandatory sanctions are administratively avoided rather than imposed. Past EPA Administrators have been unwilling to impose harsh sanctions for situations that are beyond the control of the regulatory process or relatively minor failures to comply with requirements of the Act. Discretionary sanctions can be far more effective because they can be structured at a level consistent with the degree of violation and increased if there is no response. The Texas Ozone Task Force commends the decision not to create new and environmentally counterproductive sanctions such as the drinking water hookup sanction included in other bills.

Sixth, alternate fuels can be a useful element in a nonattainment control strategy but their development must be carefully created. Moreover, it is far too early to judge which alternate fuels may ultimately be the most beneficial. Any program in this area must include all potential alternate fuels or reformulated existing fuels such as "clean gasoline". Leaving all options open is particularly important given recent analyzes that suggest that the vast majority of emissions reductions available through many alternate fuels can be achieved with well controlled vehicles using gasoline.

Seventh, the bill requires all sources of 100 tons/year or more of nitrogen oxides to apply RACT. While nitrogen oxide controls may in some areas be a positive factor in reducing ozone, there is no certainty that it is uniformly beneficial. Decisions regarding nitrogen oxide controls should be area specific and should be based on the control strategy study described above.

Eighth, while the concept of widely applying RACT is consistent with the current Clean Air Act, further consideration needs to be given to the specific requirements in this bill. While the provision includes a mechanism to show that the technology assumption is inappropriate, consideration needs to be given to sources which have already implemented controls. Similarly, the burden of implementing these steps will fall on control agencies that will already be implementing the other requirements of the bill. Some consideration needs to be given to phasing in the requirements.

Ninth, in general, we must assume that any nonattainment title will ultimately be included in legislation that includes other Clean Air provisions including provisions relating to the control of "air toxics". Because most of the legislation relating to control of hazardous air emissions is based on the concept of controlling source categories of such emissions, there is a substantial likelihood of conflict between controls required under nonattainment and controls required under air toxics provisions. These conflicts may relate to the timing of implementing controls or of the absolute control requirements. Consequently, as these two policies are developed, it is imperative that attention be given to assure that they are coordinated to be implement in the most cost effective and equitable manner possible.

Tenth, the inclusion of a sanction to levy fines only on stationary sources only in areas which fail to meet the ozone standard is inappropriate. Many areas of the country are dominated by mobile sources and the stationary source component will be well controlled by the attainment date. There is no justification for a standard which assumes that the burden for failing to attain the standard should fall solely on one segment of the emission mix.

Eleventh, the bill includes requirements that compel a severe area to implement controls that would cap vehicle miles traveled as necessary as a part of the provisions to meet the 12 percent/3 year reduction in emissions. It also requires employers of more than 100 people to develop specific reductions in work-related vehicle trips and employee travel. This would seem to effect public and private employers. These are areas which should be approached cautiously. Past use of transportation controls has not been highly successful. Receptivity to these concepts, which may require lifestyle changes will be low or negative unless there is a belief that these steps are necessary and will reduce ozone. Because the Houston experience has suggested that extensive reductions have not produced ozone changes, action must be taken to show that the control strategy used for the area will be effective. It points again to the need for research into the entire question of ozone formation and the role volatile organic compounds and nitrogen oxides. It also emphasizes the need for adequate deadlines and adequate time to plan for complicated strategies. This time may not be available under the explicit percentage target requirements for many areas particularly those that are dominated by mobile sources.

# TESTIMONY OF RALPH ENGEL
PRESIDENT

CHEMICAL SPECIALTIES MANUFACTURERS ASSOCIATION
BEFORE THE
UNITED STATES SENATE
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
SUBCOMMITTEE ON ENVIRONMENTAL PROTECTION
SEPTEMBER 27, 1989

**Chemical Specialties Manufacturers Association**
**Suite 1120**
**1001 Connecticut Ave., N.W.**
**Washington, D.C. 20036**
**(202) 872-8110**

# TESTIMONY OF RALPH ENGEL

PRESIDENT

CHEMICAL SPECIALTIES MANUFACTURERS ASSOCIATION

BEFORE THE

SUBCOMMITTEE ON ENVIRONMENTAL PROTECTION

COMMITTEE ON ENVIRONMENT & PUBLIC WORKS

UNITED STATES SENATE

SEPTEMBER 27, 1989

GOOD AFTERNOON, MY NAME IS RALPH ENGEL; I AM PRESIDENT OF THE CHEMICAL SPECIALTIES MANUFACTURERS ASSOCIATION (CSMA) LOCATED AT 1001 CONNECTICUT AVENUE, NW, WASHINGTON, DC.

WE WELCOME THIS OPPORTUNITY, MR. CHAIRMAN, TO TESTIFY ON LEGISLATION THAT WOULD SERVE TO AMEND THE CLEAN AIR ACT.

THE CHEMICAL SPECIALTIES MANUFACTURERS ASSOCIATION (CSMA) HAS A MEMBERSHIP OF MORE THAN 400 FIRMS ENGAGED IN THE MANUFACTURE, FORMULATION, DISTRIBUTION, AND SALE OF NON-AGRICULTURAL PESTICIDES, INCLUDING ANTIMICROBIAL PRODUCTS, AS WELL AS, AUTOMOTIVE SPECIALTY PRODUCTS, DETERGENTS AND CLEANING COMPOUNDS, PERSONAL CARE PRODUCTS, AND POLISHES AND FLOOR MAINTENANCE PRODUCTS FOR HOUSEHOLD, INSTITUTIONAL AND INDUSTRIAL USE. THESE PRODUCTS ARE FORMULATED AND PACKAGED IN MANY FORMS AND ARE MARKETED NATIONALLY.

IN ADDITION, CSMA ALSO REPRESENTS A COALITION OF INDUSTRY ASSOCIATIONS CONCERNED WITH REGULATIONS ON CONSUMER PRODUCTS WHICH INCLUDES THE SOAP AND DETERGENT ASSOCIATION (SDA), AND THE COSMETIC TOILETRIES AND FRAGRANCE ASSOCIATION (CTFA) AS WELL AS A NUMBER OF COMPANIES INCLUDING SEVERAL WHO PRODUCE ETHICAL AND OVER-THE-COUNTER PHARMACEUTICAL PRODUCTS.

BOTH OF THE NONATTAINMENT BILLS NOW BEFORE THIS COMMITTEE CONTAIN PROVISIONS FOR THE REGULATION OF VOLATILE ORGANIC COMPOUND (VOC) EMISSIONS FROM COMMERCIAL AND CONSUMER PRODUCTS. REGARDLESS OF WHAT HAS BEEN WRITTEN AND SAID ON THE SUBJECT, IT IS IMPOSSIBLE, AT THIS POINT, TO KNOW HOW TO APPROACH THESE SMALL SOURCES OF EMISSIONS WITH ANY CERTAINTY OR KNOWLEDGE OF WHETHER IT IS FEASIBLE TO ATTEMPT TO CONTROL THEM AT ALL.

COMMERCIAL AND CONSUMER SOLVENTS ARE AN ENTIRELY NEW AND UNIQUE SUBJECT FOR CLEAN AIR REGULATION. IT IS A CATEGORY THAT CANNOT BE DEALT WITH BY TRADITIONAL APPROACHES OR CONTROL STRATEGIES. ITS CONTRIBUTION TO OZONE IS NOT AT ALL CLEAR. THERE IS, AT THIS POINT, SIMPLY NO RELIABLE DATA BASE FROM WHICH TO DETERMINE THAT CONTRIBUTION. NEITHER IS IT CLEAR THAT AN ATTEMPT TO CONTROL EMISSIONS FROM THIS SOURCE WILL EITHER BE TECHNICALLY OR ECONOMICALLY FEASIBLE.

THE PRODUCTS CONTEMPLATED IN PROPOSALS TO REGULATE EMISSIONS FROM "COMMERCIAL AND CONSUMER PRODUCTS" ARE NOT OF A PARTICULAR TYPE OR CLASS BUT COVER A UNIVERSE OF COMMERCIAL, HOUSEHOLD, AND PERSONAL CARE USES--ENCOMPASSING MORE THAN 700,000 PRODUCTS IN TOTAL. THEY INCLUDE PERSONAL CARE PRODUCTS SUCH AS SHAVING CREAM, MOUTHWASH, DEODORANT, PERFUME, SHAMPOO AND SUNSCREEN; HOME CARE PRODUCTS SUCH AS WINDOW CLEANER, FURNITURE POLISH, FLOOR WAX, AND KITCHEN CLEANERS; AUTO CARE PRODUCTS SUCH AS CARBURETOR CLEANERS, ANTI-FREEZE AND WINDSHIELD DEICER; AND VITAL HEALTH CARE PRODUCTS SUCH AS DISINFECTANTS, STERILANTS, INSECTICIDES AND MEDICINES. THEY MAY EVEN INCLUDE WINE, BEER AND OTHER ALCOHOLIC BEVERAGES.

IT SHOULD BE NOTED THAT "COMMERCIAL AND CONSUMER PRODUCTS" COULD INCLUDE ARCHITECTURAL COATINGS, TRAFFIC COATINGS, AND AIRCRAFT OR MARINE PRODUCTS, ETC. I AM ONLY ADDRESSING CONSUMER PRODUCTS AS OUTLINED ABOVE.

THESE PRODUCTS CANNOT BE VIEWED IN THE SAME WAY AS TRADITIONAL EMISSION SOURCES. THE CLEAN AIR ACT, UP TO THIS POINT, HAS REGULATED WASTE EMISSION AND NOT END USE CONSUMER PRODUCTS CREATED FOR THE BENEFIT OF SOCIETY. THE REGULATION OF CONSUMER PRODUCTS RAISES MANY DIFFERENT ISSUES. INSTEAD OF CONTROLLING VALUELESS WASTE, REGULATION WILL BE DIRECTED AT PRODUCTS WHICH THEMSELVES, BECAUSE OF THEIR PRESENT COMPOSITION, PROVIDE IMPORTANT SOCIETAL AND PUBLIC HEALTH BENEFITS. THESE BENEFITS HAVE TO BE CONSIDERED AS PART OF ANY REGULATORY DECISION. IT WOULD OBVIOUSLY BE BAD PUBLIC POLICY TO REQUIRE REFORMULATION OF MEDICINES, DISINFECTANTS, INSECTICIDES AND STERILANTS AND A WHOLE HOST OF OTHER CONSUMER PRODUCTS FOR CLEAN AIR PURPOSES WITHOUT MAKING SURE THAT THE PRODUCTS WILL CONTINUE TO BE EFFECTIVE.

MOST CONSUMER PROUCTS ARE MARKETED NATIONALLY AND RELY UPON THE FREEDOM OF MOVEMENT TRADITIONALLY AND CONSTITUTIONALLY ACCORDED TO INTERSTATE COMMERCE. IF ANYTHING SHOULD MOVE FREELY IN THE MARKETPLACE, IT MUST BE THESE MANY PRODUCTS WHICH ARE SUCH AN IMPORTANT PART OF MODERN LIFE. ANY REGULATION OF EMISSIONS FROM COMMERCIAL AND CONSUMER PRODUCTS MUST NOT ERECT UNNECESSARY BARRIERS TO THE FREE FLOW OF COMMERCE. THERE MUST BE CONSISTENCY OF REGULATION IN THE NATIONAL MARKETPLACE. AT THE VERY LEAST, ANY FEDERAL PROGRAM SHOULD TAKE PARTICULAR CARE NOT TO CREATE INCENTIVES FOR STATES TO ADOPT DIFFERENT OR OBSTRUCTIVE REQUIREMENTS FOR COMMERICIAL AND

CONSUMER PRODUCTS.

BOTH OF THE NONATTAINMENT BILLS CURRENTLY BEFORE THIS COMMITTEE MOVE TOWARD ADDRESSING SOME OF THESE CONCERNS. IN PARTICULAR, BOTH S. 1490 AND S. 1630 PROVIDE FOR A STUDY OF THE ISSUES PRIOR TO REGULATION. BOTH PROVIDE THAT WHEN THE ADMINISTRATOR OF THE ENVIRONMENTAL PROTECTION AGENCY (EPA) DOES ISSUE REGULATIONS, HE MUST CONSIDER TECHNOLOGICAL AND ECONOMIC FEASIBILITY, AS WELL AS HEALTH, ENVIRONMENTAL, AND ENERGY IMPACTS. WE BELIEVE, THAT THERE ARE SEVERAL AREAS OF THIS LEGISLATION IN WHICH IMPROVEMENT IS MOST NECESSARY, THESE ARE:

**I. A TWO YEAR STUDY WILL NOT PROVIDE THE NECESSARY INFORMATION FOR RATIONAL ACTION.**

BOTH S. 1490 AND S. 1630 PROVIDE FOR A TWO-YEAR STUDY. DURING THIS PERIOD EPA IS DIRECTED TO STUDY AND ANALYZE THE SUBJECT OF EMISSIONS FROM CONSUMER PRODUCTS. WE BELIEVE THIS PERIOD IS INSUFFICIENT. THE CONGRESSIONAL OFFICE OF TECHNOLOGY ASSESSMENT (OTA), IN ITS RECENT STUDY: CATCHING OUR BREATH: NEXT STEPS FOR REDUCING URBAN OZONE, NOTED THAT VERY LITTLE IS KNOWN ABOUT EITHER THE OZONE CONTRIBUTION OR CONTROL TECHNOLOGY FOR CONSUMER PRODUCTS. FOR THIS REASON, OTA EXCLUDED CONSUMER PRODUCTS ALTOGETHER FROM ITS EMISSIONS REDUCTION POTENTIAL AND COST ANALYSES.

CSMA BELIEVES THAT IT IS UNREALISTIC TO EXPECT THAT THIS FACTUAL VACUUM CAN BE FILLED IN A TWO YEAR PERIOD. A FEDERAL COURT IN NEW YORK RECENTLY AGREED. IT FOUND, IN REVIEWING A STATE IMPLEMENTATION PLAN (SIP) REVISION REGULATING CONSUMER PRODUCTS THE COURT AGREED WITH NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION's (DEC) ASSERTION THAT NO VALID DATA EXISTED TO REGULATE THESE PRODUCTS IN FACT IT FURTHER AGREED THAT A FOUR YEAR STUDY WOULD BE REQUIRED. THERE ARE NO

FACTS BEFORE THIS COMMITTEE WHICH SUGGEST THAT THE NEW YORK COURT WAS WRONG IN ITS ASSESSMENT. CSMA BELIEVES THAT THE BEST APPROACH IS:

FIRST, CONSUMER PRODUCTS SHOULD BE DEFINED AND A COMPLETE EMISSIONS INVENTORY OF THE APPROXIMATELY 700,000 PRODUCTS SHOULD BE COMPILED.

THE NEXT STEP AFTER THE INVENTORY IS ESTABLISHED IS TO COMMENCE A A STUDY WHICH WOULD, AT A MINIMUM, IDENTIFY THE FOLLOWING:

(A) CONSUMER SOLVENT CONTRIBUTIONS TO OZONE FORMATION:

(B) ALTERNATIVES FOR REDUCING VOC EMISSIONS FROM PRODUCTS;

(C) ECONOMIC, COMMERCIAL, AND TECHNICAL FEASIBILTIY OF SUCH METHODS AND ALTERNATIVES; AND

(D) ASSESS THE NET ENVIRONMENTAL, HEALTH, AND SOCIETAL IMPACTS AND/OR VALUE OF SUCH METHODS AND ALTERNATIVES.

THE STUDY WOULD ASSESS AND EVALUATE SUCH OTHER ISSUES ASSOCIATED WITH VOLATILE ORGANIC COMPOUND EMISSIONS FROM CONSUMER PRODUCTS AS ARE IDENTIFIED DURING THE PROTOCOL DEVELOPMENT PROCESS.

THE STUDY REQUIRED BY THE PROTOCOL WOULD BE COMPLETED NO LATER THAN THIRTY-SIX MONTHS AFTER THE PROTOCOL HAS BEEN DEVELOPED.

THE FINAL REPORT WOULD INCLUDE RECOMMENDATIONS WITH RESPECT TO TECHNICALLY, ECONOMICALLY, AND COMMERCIALLY FEASIBLE METHODS OF EMISSIONS REDUCTION.

FOLLOWING ISSUANCE OF THE FINAL REPORT THE EPA ADMINISTRATOR WOULD BE EMPOWERED TO PROMULGATE REGULATIONS TO REGULATE VOLATILE ORGANIC COMPOUND EMISSIONS INTO THE AMBIENT AIR FROM CONSUMER SOLVENT PRODUCTS. IN PROMULGATING SUCH REGULATIONS, THE ADMINISTRATOR WOULD TAKE INTO ACCOUNT THE RECOMMENDATIONS AND THE CONCLUSIONS OF THE REPORT AND THE ECONOMIC, TECHNICAL AND COMMERCIAL FEASIBILITY OF THE RECOMMENDED CONTROL MEASURES AS WELL AS THEIR NET ENVIRONMENTAL, HEALTH AND SOCIETAL IMPACTS.

## II. EPA MUST HAVE THE DISCRETION, UPON COMPLETION OF THE REPORT, TO DETERMINE WHETHER REGULATIONS ARE JUSTIFIED.

AT THE END OF SUCH STUDY, IF THE ADMINISTRATOR FINDS THAT REGULATION OF THE VOC EMISSIONS OF ANY OR ALL CONSUMER PRODUCTS IS BENEFICIAL AND FEASIBLE, THEN SUCH REGULATIONS CAN BE PROMULGATED. IT MUST BE MADE CLEAR IN THE STATUTE, HOWEVER, THAT THE ADMINISTRATOR'S OBLIGATION TO ISSUE REGULATIONS IS DISCRETIONARY AND THAT THE EXERCISE OF THAT DISCRETION DEPENDS ON THE RESULTS OF THE STUDY. STATUTORY LANGUAGE WHICH REQUIRES REGULATIONS REGARDLESS OF THE OUTCOME OF THE STUDY, SUCH AS IN S. 1630, PREJUDICES THE STUDY UP FRONT BY PREJUDGING THE RESULTS BEFORE IT IS EVEN CONDUCTED.

## III. FEES ARE NOT AN ACCEPTABLE CONTROL STRATEGY FOR CONSUMER PRODUCTS.

BOTH BILLS AUTHORIZE THE ADMINISTRATOR TO EMPLOY A SYSTEM OF FEES AS A METHOD OF CONTROLLING VOC EMISSIONS FROM CONSUMER PRODUCTS. CSMA SUBMITS THAT ANY GENERIC, UNFETTERED PROVISION AUTHORIZING EPA TO ASSESS FEES CARRIES TOO HIGH A POTENTIAL TO BECOME SIMPLY A REVENUE-RAISER UNRELATED TO OZONE ATTAINMENT, AND IS LIKELY TO BE VIEWED BY THE COURTS AS AN UNCONSTITUTIONAL DELEGATION OF THE CONGRESSIONAL POWER TO TAX. ECONOMIC INCENTIVES ARE USEFUL FOR CONTROLLING EMISSIONS FROM STATIONARY SOURCES, BUT NOT FOR CONTROLLING EMISSIONS FROM CONSUMER PRODUCTS. THEY RAISE THE SPECTRE OF GOVERNMENTAL REGULATION OF THE AMOUNT OF PRODUCTS WHICH MAY BE SOLD AND CARRY WITH THEM THE POTENTIAL OF SERIOUSLY INTERFERING WITH THE MARKETABILITY OF CONSUMER PRODUCTS.

## IV. THE SAME CRITERIA FOR ADDITIONAL STATE REGULATION WHICH EXIST IN CURRENT LAW FOR MOTOR VEHICLES SHOULD APPLY TO CONSUMER PRODUCTS.

THE INTERSTATE COMMERCE CLAUSE OF THE UNITED STATES CONSTITUTION PROHIBITS BARRIERS TO THE FREE FLOW OF COMMERCE AMONG THE STATES. CSMA BELIEVES THAT THE GOAL OF CONSISTENCY OF REGULATION IN THE NATIONAL MARKETPLACE CAN BE ACCOMMODATED WITH NEED, UNDER CERTAIN COMPELLING AND EXTRAORDINARY CIRCUMSTANCES, FOR STATES TO ADOPT ADDITIONAL CONTROLS AFTER A FINDING OF NEED HAS BEEN MADE. CURRENT CLEAN AIR ACT PROVISIONS RELATING TO MOBILE SOURCES, MOTOR FUELS AND AIRCRAFT MAKE SUCH AN ACCOMMODATION. MOREOVER, DURING THE PENDENCY OF FEDERAL REGULATION, THE STATES OUGHT TO BE CALLED UPON TO SUSPEND THEIR OWN EFFORTS TO ADOPT OR ENFORCE STANDARDS RELATING TO EMISSIONS FROM COMMERCIAL AND CONSUMER PRODUCTS. S. 1490 CONTAINS SUCH A PROVISION RESPECTING EMISSIONS FROM MARINE VESSELS. CSMA BELIEVES IT IS NOT ONLY APPROPRIATE BUT A MUST WITH REGARD TO CONSUMER PRODUCT REGULATION AS WELL.

## V. CONSUMER PRODUCTS SHOULD NOT BE INCLUDED UNDER THE DEFINITION OF STATIONARY SOURCE.

BOTH BILLS DEFINE "STATIONARY SOURCE" AS BEING "ANY SOURCE OF AN AIR POLLUTANT EXCEPT THOSE EMISSIONS RESULTING DIRECTLY FROM AN INTERNAL COMBUSTION ENGINE." CSMA URGES THAT THIS DEFINITION BE CLARIFIED TO EXCLUDE COMMERICAL AND CONSUMER PRODUCTS. THE TERM "STATIONARY SOURCE" IS A TERM OF ART UNDER THE CLEAN AIR ACT. IT TRIGGERS MANY DIVERSE OBLIGATIONS. COMMERCIAL AND CONSUMER PRODUCTS SHOULD NOT BE INCLUDED UNDER THAT DEFINITION, BUT SHOULD BE TREATED SEPARATELY UNDER THE SPECIFIC REGULATORY AUTHORITIES ESTABLISHED BY BOTH BILLS. THE ADDITION OF LANGUAGE WHICH MAKES IT CLEAR THAT THE

TERM DOES NOT INCLUDE COMMERICAL AND CONSUMER PRODUCTS IS FULLY CONSISTENT WITH EPA's INTENT WITH RESPECT TO S. 1490. IN ITS SECTION BY SECTION ANALYSIS OF THE ADMINISTRATION'S DRAFT BILL, EPA DESCRIBED THE PURPOSE OF THIS DEFINITION OF "STATIONARY SOURCES" AS BEING TO "CONFIRM THAT EMISSIONS FROM MOVABLE STATIONARY SOURCES SUCH AS MOBILE ASPHALT BATCH MIXING TRAILERS AND SHIPS AT PORT ARE SUBJECT TO THE ACT'S STATIONARY SOURCE REQUIREMENTS."

## VI. ARTIFICIAL LIMITS ON REAL EMISSIONS REDUCTIONS UNFAIRLY PENALIZES CONSUMER PRODUCTS AND CREATES FEDERAL INCENTIVES FOR DIFFERING STATE STANDARDS.

FINALLY, CSMA IS CONCERNED ABOUT A PROVISION IN S. 1490 IN WHICH STATES ARE DENIED CREDIT FOR EMISSIONS REDUCTIONS ACHIEVED BY A MANDATED REDUCTION IN THE REID VAPOR PRESSURE OF GASOLINE OR BY VEHICLE TAILPIPE OR EVAPORATIVE EMISSIONS MEASURES. ARTIFICIAL LIMITS ON A STATE'S ABILITY TO CLAIM CREDIT FOR EMISSIONS REDUCTIONS, WITHOUT EQUIVALENT REDUCTIONS IN EMISSIONS INVENTORY, UNFAIRLY INFLATES THE EMISSIONS REDUCTION BURDEN TO BE BORNE BY OTHER REGULATED ENTITIES.

REID VAPOR PRESSURE CONTROLS ARE WIDELY RECOGNIZED AS ONE OF THE MOST EFFECTIVE OZONE CONTROL STRATEGIES, BOTH IN TERMS OF EMISSIONS REDUCTION AND COST. MODELING SHOWS THAT THESE CONTROLS CAN, BY THEMSELVES, BRING SOME AREAS INTO ATTAINMENT.

S. 1490, HOWEVER, REQUIRES THE STATES TO DEVISE SIP's WHICH PROJECT ATTAINMENT WITHOUT BEING ABLE TO COUNT THESE EXTREMELY SUBSTANTIAL REDUCTIONS. FOR EXAMPLE, IF AS A RESULT OF FEDERAL CONTROLS ON REID VAPOR PRESSURE, EMISSIONS GO DOWN BY 50%, THE STATE IS REQUIRED TO PLAN AS THOUGH EMISSIONS WERE NOT SO REDUCED. CONTROLS ON COMMERCIAL AND CONSUMER PRODUCTS WILL ACCORDINGLY HAVE TO BE FAR MORE DRACONIAN THAN THE FACTS WOULD ACTUALLY JUSTIFY. SUCH CONSTRAINTS

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ARE INCONSISTENT WITH THE ULTIMATE OBJECTIVE OF THE BILL, WHICH IS TO ACHIEVE THE NATIONAL AMBIENT AIR QUALITY STANDARD FOR OZONE.

## VII. SUMMARY

CSMA BELIEVES THAT, IN THE AREA OF COMMERCIAL AND CONSUMER PRODUCT REGULATION, BOTH S. 1490 AND S. 1630 BENEFIT FROM THE INQUIRIES AND ANALYSES WHICH HAVE BEEN MADE BY BOTH GOVERNMENT AND INDUSTRY OVER THE LAST TWO YEARS. BOTH BILLS REFLECT A BIT MORE SENSITIVITY TO THE COMPLEXITIES INVOLVED IN ANY REGULATION OF EMISSIONS FROM THIS CATEGORY OF SOURCES. BOTH REFLECT AN AWARENESS OF THE NEED TO PROCEED WITH CARE AND WITH SIGNIFICANT IMPROVEMENT, IN OUR VIEW, ALONG THE LINES DISCUSSED.

## VIII. CONCLUSION

WE APPRECIATE THIS OPPORTUNITY, MR. CHAIRMAN, TO PRESENT OUR VIEWS CONCERNING THE APPROPRIATE STRATEGY TO ESTABLISHING A FEDERAL SCHEME FOR ADDRESSING REGULATIONS OF CONSUMER PRODUCTS AS PART OF A PLAN FOR ACHIEVING OZONE ATTAINMENT.

II

101st CONGRESS
1st Session

# S. 1630

To amend the Clean Air Act to provide for attainment and maintenance of health protective national ambient air quality standards, and for other purposes.

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## IN THE SENATE OF THE UNITED STATES

September 14 (legislative day, September 6), 1989

Mr. Baucus (for himself, Mr. Chafee, Mr. Burdick, Mr. Durenberger, Mr. Graham, Mr. Jeffords, Mr. Lautenberg, Mr. Lieberman, Mr. Mitchell, Mr. Moynihan, Mr. Warner, Mr. Cohen, and Mr. Cranston) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

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# A BILL

To amend the Clean Air Act to provide for attainment and maintenance of health protective national ambient air quality standards, and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*

**SECTION 1. SHORT TITLE AND TABLE OF CONTENTS.**

This Act may be cited as the "Clean Air Restoration and Standards Attainment Act of 1989".

TABLE OF CONTENTS

TITLE I—PROVISIONS FOR ATTAINMENT AND MAINTENANCE OF AMBIENT AIR QUALITY STANDARDS

Sec. 101. Designation of areas.
Sec. 102. Enhanced monitoring and inventories.

Sec. 103. Transportation guidance.
Sec. 104. General planning requirements.
Sec. 105. Federal implementation plans.
Sec. 106. General provisions for nonattainment areas.
Sec. 107. Additional requirements for ozone nonattainment areas.
Sec. 108. Additional requirements for carbon monoxide nonattainment areas.
Sec. 109. Additional requirements for PM-10 nonattainment areas.
Sec. 110. Outer continental shelf activities.
Sec. 111. Indian tribes.
Sec. 112. Miscellaneous and conforming amendments.

## TITLE II—PROVISIONS RELATING TO MOBILE SOURCES

Sec. 201. Emissions standards for certain motor vehicles.
Sec. 202. Carbon monoxide emissions at cold temperatures.
Sec. 203. Control of vehicle refueling emissions.
Sec. 204. Evaporative emissions.
Sec. 205. Onboard emission diagnostic systems.
Sec. 206. Emissions of carbon dioxide from passenger cars.
Sec. 207. Low-polluting vehicles.
Sec. 208. Light duty vehicle useful life.
Sec. 209. Warranties.
Sec. 210. Non-road engines.
Sec. 211. Prohibition on production of engines requiring leaded gasoline.
Sec. 212. Motor vehicle testing and certification.
Sec. 213. In-use compliance—recall.
Sec. 214. Fuel volatility.
Sec. 215. Desulfurization.
Sec. 216. Lead phasedown.
Sec. 217. Fuel quality.
Sec. 218. Oxygenated fuels.
Sec. 219. Misfueling.
Sec. 220. Enforcement.

## TITLE III—PROVISIONS RELATING TO ENFORCEMENT

Sec. 301. Section 113 enforcement.
Sec. 302. Reviewability of administrative orders.
Sec. 303. Compliance certification.
Sec. 304. Contractor inspections.
Sec. 305. Administrative enforcement subpoenas.
Sec. 306. Emergency orders.
Sec. 307. Contractor listings.
Sec. 308. Judicial review pending reconsideration of regulation.
Sec. 309. Citizen suits and petitions.
Sec. 310. Enhanced implementation and enforcement of new source review requirements.
Sec. 311. Movable stationary sources.

## TITLE I—PROVISIONS FOR ATTAINMENT AND MAINTENANCE OF AMBIENT AIR QUALITY STANDARDS

### DESIGNATION OF AREAS

SEC. 101. (a) DESIGNATIONS.—Section 107 of the Clean Air Act is amended by adding the following new subsection:

"(f)(1) Upon promulgation of a new or revised national ambient air quality standard, the Administrator shall designate as attainment, nonattainment or unclassifiable all areas of the country pursuant to this subsection as expeditiously as practicable, but in no case later than six months from the date of promulgation of the new or revised standard. Such period may be extended for specific areas for up to six additional months in the event the Administrator has, after making reasonable efforts to obtain the relevant information, insufficient information to make the designations. The Administrator shall designate as—

"(A) nonattainment, any area that does not meet (or contributes to ambient air quality in a nearby area that does not meet) the new or revised national ambient air quality standard for the pollutant;

"(B) attainment, any area (other than an area identified in subparagraph (A)) that meets the new or revised national ambient air quality standard for the pollutant;

"(C) unclassifiable, any area that cannot be classified on the basis of available information as having met the new or revised national ambient air quality standard for the pollutant.

"(2) A designation for an area made pursuant to this subsection shall remain in effect until the Administrator redesignates the area.

"(3) Each area which, as of the last calendar year before the date of enactment of this subsection for which data is available, did not meet the national primary ambient air quality standard for ozone or such standard for carbon monoxide averaged over an eight-hour period, is hereby designated by operation of law as nonattainment.

"(4) Until redesignation by the Administrator, each area which—

"(A) is identified in 52 Federal Register 29383 (August 7, 1987) as a Group I area, or

"(B) contains a site for which air quality monitoring data shows a violation of the national ambient air quality standard for PM–10 before the date of enactment of this subsection,

is hereby designated by operation of law nonattainment for PM–10. All other areas of the country not described in subparagraph (A) or (B) are designated unclassifiable for PM–10, until such time as the Administrator redesignates any such area. Any designation for particulate matter (measured in terms of total suspended particulates) which the Administrator promulgated pursuant to section 107(d), as in effect before the date of enactment of this subsection, shall remain in effect for purposes of implementing the maximum allowable increases in concentrations of particulate matter (measured in terms of total suspended particulates) pursuant to section 163(d), until the Administrator determines that such designation is no longer necessary for such purpose.

(b) REDESIGNATION.—Section 107(d)(5) of the Clean Air Act is amended to read as follows:

> "(5)(A) Based on a request for area redesignation by the Governor of any State, or at any time on the Administrator's own motion, the Administrator may revise the designation of any area or portion of an area in accordance with this section and part D.
>
> "(B) Whenever the Administrator obtains evidence demonstrating that an area exceeds a national ambient air quality standard for any pollutant and is not designated as a nonattainment area for such pollutant pursuant to this section, the Administrator shall, within ninety days of receiving such evidence, propose, and within one hundred and eighty days promugate by

rule, a revised designation of such area as nonattainment for such pollutant, and where applicable, a classification of such area in accordance with part D.

"(C) The Administrator may redesignate a nonattainment area to attainment only if—

"(i) the Administrator promulgates the redesignation by rule, after notice and opportunity for comment;

"(ii) the Administrator determines that the area has attained the national ambient air quality standard;

"(iii) the Administrator has fully approved the applicable implementation plan;

"(iv) the Administrator determines that the improvement in air quality is due to permanent reductions in emissions;

"(v) the Administrator has fully approved a maintenance plan for the area as meeting the applicable requirements of section 110 and part D; and

"(vi) the State containing such area has met all requirements applicable to the area under section 110 and part D.

"(D) The Administrator shall not redesignate any area from nonattainment to unclassifiable.".

"(c) AREA BOUNDARIES.—Section 107(c) of the Clean Air Act is amended by inserting "(1)" after "(c) and by adding the following new paragraphs at the end thereof:

"(2) If an area is designated nonattainment with respect to ozone and is located within a metropolitan statistical area or a consolidated metropolitan statistical area (as defined by the Office of Management and Budget), the boundaries of such area are hereby revised by operation of law to include the entire metropolitan statistical area or consolidated metropolitan statistical area, as the case may be. Such boundary revision shall apply for purposes of any State implementation plan revision required to be submitted by any State after enactment of this paragraph.

"(3) In the case of any area which is designated as a nonattainment area for carbon monoxide and is classified as serious pursuant to section 187(a) or this section, the Administrator may, after consultation with the State in which such area is located, modify the boundaries of the area by rule to include the entire metropolitan statistical area or consolidated metropolitan statistical area, as the case may be, if the Administrator determines that such modification is necessary to attain the carbon monoxide air quality standard. Such boundary revision shall apply for purposes of any State implementation plan revision required to be submitted by the State after such modification.".

### ENHANCED MONITORING AND INVENTORIES

SEC. 102. Section 108 of the Clean Air Act is amended by adding the following at the end thereof:

"(g) GUIDELINES FOR ENHANCED MONITORING AND INVENTORIES.—Not later than six months after enactment of this subsection, the Administrator shall publish the following:

"(1) guidelines for enhanced monitoring by the State or local air pollution control agencies of emissions of pollutants (or precursors thereof) for which there is a national ambient air quality standard established under section 109, including guidelines governing the frequency, location, and maintenance of monitors; and

"(2) guidelines for improving the inventories of emissions from mobile and stationary sources (including, but not limited to, emissions factors for estimating emissions from stationary sources which emit less than twenty-five tons per year and other area sources) of pollutants (or precursors thereof) for which there is a national ambient air quality standard established under section 109.

Failure by the Administrator to publish guidelines required under paragraphs (1) and (2) shall not affect other applicable deadlines under this Act, including, but not limited to requirements under section 110 or part D.".

TRANSPORTATION GUIDANCE

SEC. 103. (a) TRANSPORTATION PLANNING GUIDANCE.—Section 108(e) of the Clean Air Act is amended by deleting the first sentence and inserting in lieu thereof the following: "The Administrator shall, after consultation with the Secretary of Transportation and with State and local officials, within nine months after enactment of the Clean Air Restoration and Standards Attainment Act of 1989 and periodically thereafter as necessary to maintain a continuous transportation-air quality planning process, update the June 1978 Transportation-Air Quality Planning Guidelines and publish guidance on the development and implementation of transportation and other measures necessary to demonstrate and maintain attainment of national ambient air quality standards.".

(b) TRANSPORTATION CONTROL MEASURES.—Section 108(f)(1) of the Clean Air Act is amended by deleting all after "(f)" through the end of subparagraph (A) and inserting in lieu thereof the following:

"(1) The Administrator shall publish and make available to appropriate Federal, State, and local environmental and transportation agencies not later than one year after enactment of the Clean Air Restoration and Standards Attainment Act of 1989, and from time to time thereafter—

"(A) information prepared, as appropriate, in consultation with the Secretary of Transportation, regarding the formulation and emission reduction potential of transportation control measures related to carbon monoxide, ozone precursors, particulate matter and toxic air pollutants, including, but not limited to—

"(i) programs for improved public transit;

"(ii) restriction of certain roads or lanes to, or construction of such roads or lanes for use by, passenger buses or high occupancy vehicles;

"(iii) employer-based transportation management plans;

"(iv) trip-reduction ordinances;

"(v) traffic flow improvement programs that achieve emission reductions;

"(vi) fringe and transportation corridor parking facilities serving multiple occupancy vehicle programs or transit service;

"(vii) programs to limit or restrict vehicle use in downtown areas or other areas of emission concentration particularly during periods of peak use, through road use charges, tolls, parking surcharges, or other pricing mechanisms, vehicle restricted zones or periods, or vehicle registration programs;

"(viii) programs for the provision of all forms of high-occupancy, shared-ride services;

"(ix) transportation management plans for shopping centers;

"(x) programs to limit portions of road surfaces or certain sections of the metropolitan area to the use of non-motorized vehicles or pedestrian use, both as to time and place;

"(xi) programs for secure bicycle storage facilities and other facilities, including bicycle lanes, for the convenience and protection of bicyclists, in both public and private areas;

"(xii) programs to control extended idling of vehicles;

"(xiii) programs for the conversion of fleet vehicles to cleaner engines or fuels, or to otherwise control fleet vehicle operations; and

"(xiv) programs to reduce motor vehicle emissions which are caused by extreme cold start conditions;".

### GENERAL PLANNING REQUIREMENTS

SEC. 104. (a) SUBMISSION AND APPROVAL OF PLANS.—Section 110 of the Clean Air Act is amended as follows:

(1) Subsection (a)(1) is amended by striking "nine" where it appears and inserting "twenty-four" in

lieu thereof and by inserting the following at the end thereof: "Whenever an area containing all or part of a metropolitan statistical area or consolidated metropolitan statistical area is designated attainment or unclassifiable with respect to a national ambient air quality standard, the Administrator shall, and in other cases may, require the State containing such area to submit an implementation plan (including such emissions inventories as the Administrator may prescribe) that provides for maintenance of such standard for at least twenty years from the date such plan is submitted. Every ten years after submission of the last twenty-year maintenance plan, the State shall submit an updated twenty-year maintenance plan.".

(2) Subsection (a)(2) is amended by striking "four" in the first sentence and inserting "twelve" in lieu thereof.

(b) SAVINGS CLAUSES AND ENFORCEABILITY OF PLANS.—Section 110(d) of the Clean Air Act is amended by adding the following at the end thereof: "Such term includes any portion of an implementation plan which has been submitted by a State and approved by the Administrator. Notwithstanding any other provision of this Act, each provision of such implementation plan (and each permit in effect under such plan) shall remain in effect, and shall be enforced under this Act, until a revision of such plan is approved by the Administrator or a plan is promulgated by the Administrator under subsection (c).".

### FEDERAL IMPLEMENTATION PLANS

SEC. 105. Section 110(c)(1) of the Clean Air Act is amended to read as follows:

"(1)(A) The Administrator may, after notice and opportunity for public comment, promulgate regulations setting forth an implementation plan, or portion thereof, for a State whenever the Administrator—

"(i) finds a State has failed to submit an implementation plan or revisions as required by this section or parts C or D;

"(ii) determines that a plan, or portion thereof, submitted by a State is not in accordance with the requirements of this section or parts C or D; or

"(iii) finds that any requirement of a previously approved plan is not being implemented.

"(B) If, two years after the imposition of any sanctions under this section or part D for failure to submit a plan or portion thereof that meets the requirements of this section and part D, a State has failed to submit such a plan, the Administrator shall propose regulations setting forth a plan, or portion of a plan, assuring that the requirements of this Act are met. The plan proposed by the Administrator shall be promulgated after notice and opportunity for public hearing in the State, but not later than one year after the date of proposal, unless, within such period, the State has adopted and submitted a plan which the Administrator has determined is in accordance with the provisions of this section and part D.

"(C) Any plan proposed or promulgated pursuant to this paragraph shall meet all of the requirements of this section and part D, except that an initial plan for a nonattainment area may be promulgated without a demonstration of attainment, provided that such plan is revised by the Administrator not later than three years after the original date of proposal to include such demonstration.

"(D) If, subsequent to the promulgation of an implementation plan by the Administrator, the State adopts and submits a plan, or portion of a plan, which meets all of the requirements of this section and part D, the Administrator may approve the proposed State plan, or portion thereof, for implementation in lieu of the plan promulgated under this paragraph.".

### GENERAL PROVISIONS FOR NONATTAINMENT AREAS

SEC. 106. (a) HEADING.—Part D of the Clean Air Act is amended by inserting "SUBPART 1—NONATTAINMENT AREAS IN GENERAL" immediately after the heading "PART D—PLAN REQUIREMENTS FOR NONATTAINMENT AREAS."

(b) APPLICABILITY.—Subpart 1 of part D of the Clean Air Act is amended by adding a new section 170 as follows:

"APPLICABILITY

"SEC. 170. Each provision of this subpart applies as set forth herein, except to the extent it is inconsistent with a provision in another subpart, in which case the provision in such other subpart shall apply.".

(c) DEFINITIONS.—Section 171 of the Clean Air Act is amended—

(1) by amending paragraph (2) to read as follows:

"(2) The term 'nonattainment area' means, for any air pollutant, an area which is designated 'nonattainment' with respect to that pollutant pursuant to section 107."; and

(2) by adding at the end thereof the following new paragraph:

"(5) The term 'major stationary source' or 'major emitting facility' includes each discrete operation, unit or other activity and each combination thereof that, except as otherwise provided in this part, produces or has the potential to produce emissions of 100 tons or more per year of a pollutant or precursors of a pollutant which contribute to ambient air quality in an area that does not meet the national ambient air quality standard for the pollutant.".

(d) PERMITS.—

(1) Section 172 of the Clean Air Act is amended as follows:

(A) Subsection (a) is deleted;

(B) Subsection (b) is relettered "(a)", the text following "The" through "subsection (a)" in the first sentence is deleted, and the following is inserted in lieu thereof; "provisions of an applicable implementation plan for a State relating to attainment and maintenance of national ambient air quality standards in any nonattainment area"; and

(C) Section 172(a)(6) (as redesignated by subparagraph (B)) is amended to read as follows:

"(6) require permits for the construction and operation of new or modified major stationary sources, and, beginning not later than three years after the date of enactment of the Clean Air Restoration and Standards Attainment Act of 1989, for the operation of all major stationary sources, in accordance with section 173 (relating to permit requirements);".

(2) Section 173 of the Clean Air Act is amended by inserting "(a) CONSTRUCTION PERMITS—" after "SEC. 173.", by deleting "and operate" in the first sentence, and by adding the following at the end thereof:

"(b) OPERATING PERMITS.—

"(1) Each operating permit issued as required pursuant to this part for a new or existing stationary source shall—

"(A) be for a fixed term not to exceed five years and shall require compliance with applicable emission limitations and with such monitoring measures as are appropriate for adequately determining compliance with such limitations;

"(B) require the permittee to submit quarterly reports to the permitting authority containing the results of the monitoring required under paragraph (1) and, no less often than every six months, certification to the permitting authority that demonstrates compliance with the permit. Any report or certification required to be submitted by a permittee under this title shall be signed by a responsible corporate official who shall certify its accuracy;

"(C) require that the permittee promptly report any violations of the permit or other requirements under this Act to the permitting authority and a program for correcting these violations including a schedule for implementation of the corrections; and

"(D) set forth inspection and entry requirements to assure compliance with the permit terms and conditions.

"(2) Applications for any permit to be issued pursuant to this part shall be accompanied by a fee sufficient to cover all direct and indirect costs of developing and administering the permit program.

"(3) Before issuing any permit pursuant to the provisions of this part the State shall provide notice of the application and an opportunity for a public hearing on the conditions to be included in the permit.

"(4) No permit may be issued pursuant to this part if the Administrator within sixty days objects to its issuance as not meeting the goals and objectives of this Act.

"(5) A copy of each permit and certification shall be submitted by the permittee, or by the permitting authority (as determined by the permitting authority), to the Administrator and shall be available to the public in the same manner as is provided for records and reports under section 114(c). No such permit may be issued unless the permitting authority or its agent has conducted a on-site inspection of the source to which such permit is issued. Not later than six months after the enactment of this subsection the Administrator shall publish guidelines for permit programs under this part. Such guidelines may be revised from time to time as the Administrator deems appropriate.".

(e) OFFSETS.—Section 173 is further amended by adding at the end thereof the following new subsection:

"(c) OFFSETS.—A new or modified major stationary source may comply with any offset requirement in effect under this part for increased emissions of any air pollutant by obtaining enforceable emissions reductions of such air pollutant from other sources in the same nonattainment area. Such enforceable emissions reductions shall be in effect by the time a new or modified source commences operation and shall assure that the total tonnage of increased emissions of the air pollutant from the new or modified source shall be offset by a greater reduction in the actual emissions of such air pollutant from other sources in the area. Where specific ratios for such offsets are specified in other provisions of this Act, such ratios shall govern. Emissions reductions otherwise required by law shall not be credited as an emissions reductions for purposes of any such offset requirement.".

(f) PLANNING PROCEDURES.—Section 174 of the Clean Air Act is amended to read as follows:

"PLANNING PROCEDURES

"SEC. 174. (a) For any ozone, carbon monoxide or PM–10 nonattainment area, the Governor of the State containing such areas and elected officials of affected local governments shall, prior to the date required for submittal of the inventories described under sections 182(a), 188(a), and 192(a) jointly review and update as necessary the planning procedures adopted pursuant to this subsection as in effect immediately before the date of enactment of the Clean Air Restoration and Standards Attainment Act of 1989 or develop new planning procedures pursuant to this subsection, as appropriate. In preparing such procedures the State and local elected officals shall determine which elements of a revised implementation plan will be developed, adopted, and implemented (through means including enforcement) by the State and which by local governments or regional agencies, or any combination of local governments, regional agencies, or the State. The implementation plan required by this part shall be prepared by an organization certified by the State for this purpose. Where such an organization has not been designated by agreement within six months after such date of enactment, the Governor, after consultation with elected officals of local governments and in accordance with the determination under the second sentence of this subsection, shall designate an organization to prepare such plan. Such organization shall include elected officals of local government in the affected area, and representatives of the State air quality planning agency, the State transportation planning agency, the metropolitan planning organization designated to conduct the continuing, cooperative and comprehensive transportation planning process for the area under section 134 of title 23, United States Code, the organization responsible for the air quality attainment and maintenance planning process under regulations implementing this Act, and any other organization with responsibilities for developing, submitting, or implementing the plan required by this part.

"(b) The preparation of implementation plan provisions and subsequent plan revisions under the continuing transportation-air quality planning process described in section 108(e) shall be coordinated with the continuing, cooperative and comprehensive transportation planning process required under section 134 of title 23, United States Code, and such planning processes shall take into account the requirements of this part. The Administrator shall consult with, and make recommendations to, the Secretary of Transportation within nine months from the date of enactment of the Clean Air Restoration and Standards Attainment Act of 1989 on changes to the Department of Transportation policies and planning and programming process that will assist the planning and implementation process of this part.

"(c) In the case of a nonattainment area that is included within more than one State, the affected States may jointly, through interstate compact or otherwise, undertake and implement all or part of the planning procedures described in this section.".

(g) Sanctions.—Section 176 of the Clean Air Act is amended by—

(1) inserting in the heading "SANCTIONS AND" before "LIMITATIONS";

(2) deleting subsection (b) and redesignating subsections (c) and (d) as (b) and (c), respectively; and

(3) amending subsection (a) to read as follows:

"(a) Sanctions.—The following actions, as required or authorized by provisions of subpart 2 (relating to ozone and ozone precursors), subpart 3 (relating to carbon monoxide), or subpart 4 (relating to PM–10) are available as specified in such subparts, to the Administrator or the Secretary of Transportation:

"(1) a prohibition by the Administrator on the construction or modification of any major stationary source of the relevant pollutant or pollutants in a nonattainment area;

"(2)(A) a prohibition, applicable to a nonattainment area, by the Secretary of Transportation on the approval of any projects or awarding of any grants, under title 23, United States Code, other than projects or grants specified under subparagraph (B).

"(B) projects or grants that may be approved, notwithstanding the prohibition in subparagraph (A), are the following—

"(i) capital programs for improved public transit;

"(ii) construction or restriction of certain roads or lanes solely for the use of passenger buses or high occupancy vehicles;

"(iii) planning for and implementation of requirements for employers to reduce employee work-trip-related vehicle emissions;

"(iv) highway ramp metering, traffic signalization, and related programs that improve traffic flow and achieve a net emission reduction;

"(v) fringe and transportation corridor parking facilities serving multiple occupancy vehicle programs or transit operations;

"(vi) programs for inspection and maintenance of vehicles emission control systems;

"(vii) programs for the conversion of publicly-owned fleet vehicles to vehicles that use low-polluting fuels, or to otherwise control fleet vehicle operations and miles traveled;

"(viii) programs to limit or restrict vehicle use in downtown areas or other areas of emission concentration particularly during periods of peak use, through road use charges, tolls, parking surcharges, or other pricing mechanisms, vehicle restricted zones or periods, or vehicle registration programs;

"(ix) programs for breakdown and accident scene management, non-recurring congestion, and vehicle information systems, to reduce congestion and emissions; and,

"(x) such other transportation-related programs as the Administrator, in consultation with the Secretary of Transportation, finds would improve air quality and would not encourage single occupancy vehicle capacity.

Notwithstanding the requirements of title 23, United States Code, or any other provision of law, any federal funds made available to a State to carry out the provisions of such title shall be available without limitation to implement the programs and provisions of this subparagraph in nonattainment areas, and the State share shall not be required to exceed 10 percent of the cost of such programs;

"(C) Nothing in this paragraph shall preclude the Secretary of Transportation from approving projects or awarding grants under title 23, United States code, for

(i) elimination of highway safety hazards pursuant to sections 130, 152, and 402 of such title, or (ii) rehabilitation or replacement of deteriorated highway bridges, provided that such projects or grants will add no significant additional right-of-way and are determined by the Administrator to be consistent with maintaining air quality;

"(3) the withholding by the Administrator of all or part of the grants for support of air pollution planning and control programs that the Administrator is authorized to award under section 105.".

(h) CONFORMITY REQUIREMENTS.—Section 176(b) of the Clean Air Act (as redesignated by subsection (g)) is amended by deleting the second sentence, by striking "(1)", "(2)", "(3)" and "(4)" where they appear, by inserting "(1)" after "(b)", and by adding the following at the end thereof: "Conformity to a plan means—

"(A) conformity to a plan's purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards and achieving expeditious attainment of such standards; and

"(B) that such activities will not, considering any growth likely to result from such activities—

"(i) cause or contribute to any new violation of any standard in any area;

"(ii) increase the frequency or severity of any existing violation of any standard in any area; or

"(iii) delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

"(2) Any transportation plan or program developed pursuant to title 23, United States Code, or the Urban Mass Transportation Act shall implement all relevant transportation provisions of any implementation plan approved under this Act applicable to all or part of the area covered by such transportation plan or program. No Federal agency may approve, accept or fund any transportation plan, program or project unless such plan, program or project has been found to conform to this Act and any implementation plan in effect under this Act. In particular—

"(A) no transportation plan or transportation improvement program may be adopted by a metropolitan planning organization designated under title 23, United States Code, or the Urban Mass Transportation Act, or be found to be in conformity by an air quality planning agency, department or officer until a final determination has been made that emissions expected from implementation of such plans and programs are consistent with estimates of emissions from motor vehicles and necessary emissions reductions contained in the State's implementation plan, and that the plan or program will, considering any growth likely to result from such plan or program, conform to the requirements of paragraph (1)(B);

"(B) no metropolitan planning organization or other recipient of funds under title 23, United States Code, or the Urban Mass Transportation Act shall adopt or approve a transportation improvement program of projects until it determines that such program provides for timely implementation of transportation control measures consistent with schedules included in the applicable implementation plan;

"(C) no transportation project may be adopted or approved by a metropolitan planning organization or any recipient of funds designated under title 23, United States Code, or the Urban Mass Transportation Act, or found in conformity by an air quality planning agency, or approved, accepted, or funded by the Department of Transportation unless—

"(i) such a project comes from a conforming plan and program;

"(ii) the design, scope, and emissions from such project have not changed significantly since the conformity finding regarding the plan and program from which the project derived;

"(iii) emissions from such a project remain consistent with emissions reduction schedules in the applicable implementation plan; and

"(iv) it is demonstrated, in any case where such a demonstration was not made during the process to determine the conformity of the plan and program from which project derived, that the project is consistent with the provisions of paragraph (1)(B).

The determinations required by this subsection shall be made by Federal, State and local agencies as prescribed pursuant to criteria and procedures which shall be promulgated by the Administrator no later than one year after the date of enactment of the Clean Air Restoration and Standards Achievement Act of 1989. Such procedures shall include a requirement that each State containing an ozone or carbon monoxide nonattainment area shall submit to the Administrator within eighteen months of such date of enactment, a revision to its implementation plan that includes, for each such nonattainment area, criteria and procedures for assessing the conformity of any plan, program or project subject to the conformity requirements of this subsection.

(i) MAINTENANCE PLANS.—Subpart 1 of part D of the Clean Air Act is amended by adding a new section 179 as follows:

### "MAINTENANCE PLANS

"SEC. 179. (a) PLAN REQUIREMENTS.—The maintenance plan required under section 107(d)(5)(C) as a precondition for redesignation of an area shall—

"(1) comply with the provisions of section 110(a)(2);

"(2) provide for the maintenance of the national ambient air quality standard of the relevant air pollutant in such area for a period of twenty years after attainment; and

"(3) include the following provisions—

"(A) an identification of sources, including area and mobile sources, that are expected to contribute to increases in emissions of such pollutant after attainment of a national ambient air quality standard;

"(B) a quantitative estimate of emissions increases from such sources for each three-year period following attainment;

"(C) an identification of transportation control measures, emission control limitations or standards, or permit requirements as may be necessary to limit emissions or permissible emission increases; and

"(D) an identification of contingency measures to be implemented in the event of an exceedance of the air quality standard sufficient to correct any air pollution problem which may lead to redesignation as a nonattainment area.

"(b) PLAN REVISIONS.—Maintenance provisions required by this section shall be updated every ten years and submitted to the Administrator for approval pursuant to section 110 and this part as a revision to the implementation plan.".

### ADDITIONAL REQUIREMENTS FOR OZONE NONATTAINMENT AREAS

SEC. 107. Part D of the Clean Air Act is amended by adding the following new subpart at the end thereof:

## "Subpart 2—Additional Provisions Regarding Ozone Nonattainment Areas

### "CLASSIFICATION OF OZONE NONATTAINMENT AREAS

"SEC. 181. (a) CLASSIFICATION BY OPERATION OF LAW.—Each area that did not meet the national primary ambient air quality standard for photochemical oxidants (hereinafter "ozone") as of the last calendar year ending before enactment of this subpart for which data are available is hereby classified by operation of law in one of the following categories based upon the percentage by which such standard is exceeded:

| "Area classification | Amount by which standard exceeded |
|---|---|
| Moderate ozone nonattainment area | Not greater than 20 per centum |
| Serious ozone nonattainment area | More than 20 per centum but not more than 50 per centum |
| Severe ozone nonattainment area | More than 50 per centum but not more than 120 per centum |
| Extreme ozone nonattainment area | More than 120 per centum |

"(b) DATA AND METHODS FOR CLASSIFICATION.—For purposes of determining the percentage by which the national primary ambient air quality standard for ozone is exceeded in any area—

"(1) the most recent monitoring data available shall be used; and

"(2) the same methods as are used under regulations of the Administrator for determining attainment of the standard shall be applicable (including the design value, reference methods, and guidelines for interpretation of ozone air quality standards).

Not later than thirty days after the enactment of this subpart, the Administrator shall publish a notice of the percentages by which the national primary ambient air quality standard for ozone was exceeded in each area referred to in subsection (a).

"(c) DEADLINES FOR ATTAINMENT.—The following deadlines apply to the ozone nonattainment areas classified in accordance with subsection (a):

| "Area classification | Applicable Attainment Date (in years after enactment of the Clean Air Restoration and Standards Attainment Act of 1989) |
|---|---|
| Moderate Area | 5 years |
| Serious Area | 10 years |
| Severe Area | 15 years |

| "Area classification | Applicable Attainment Date (in years after enactment of the Clean Air Restoration and Standards Attainment Act of 1989) |
|---|---|
| Extreme Area | 20 years. |

"(d) REFERENCES TO TERMS.—Any reference in this subpart to a 'moderate area', a 'serious area' a 'severe area', or an 'extreme area' shall be considered a reference to a moderate ozone nonattainment area, a serious ozone nonattainment area, a severe ozone nonattainment area, or an extreme ozone nonattainment area as classified under this section.

### "REQUIREMENTS APPLICABLE TO ALL OZONE NONATTAINMENT AREAS

"SEC. 182. (a) INVENTORIES.—Not later than one year after the date of enactment of this subpart in the case of each State that contains a nonattainment area or portion thereof classified pursuant to section 181(a), or in the case of a State containing an area subsequently classified nonattainment pursuant to section 107 and this subpart, within eighteen months of such classification, such State shall submit to the Administrator—

"(1) for each such area, a comprehensive, accurate, current inventory of actual emissions in the calendar year of enactment of volatile organic compounds and oxides of nitrogen from all sources in such area. Each such inventory shall be prepared in accordance with the guidance required to be published by the Administrator pursuant to section 108(g)(2), if such guidance is available. Revisions of each such inventory shall be submitted every three years thereafter until the area for which the inventory is prepared is redesignated to attainment; and

"(2)(A) a revision to the State implementation plan that contains a requirement that the owner or operator of each stationary source of oxides of nitrogen or volatile organic compounds within an ozone nonattainment area or portion thereof in such State provide the State with a statement in such form as the Administrator may prescribe (or the State may prescribe, if the Administrator does not) for classes or categories of sources, showing the actual emissions from that source during the previous calendar year of oxides of nitrogen and volatile organic compounds. The first such statement shall be submitted for the calendar year in which the revision referred to in the first sentence of this subparagraph was submitted to the Administrator. Subsequent statements shall be submitted at least annually thereafter.

"(B) The State may waive the application of subparagraph (A) to any class or category of stationary sources which emit less than twenty-five tons per year of oxides of nitrogen or volatile organic compounds if the State, in its submissions under paragraph (1), provides an inventory of emissions from such class or category of sources based on guidelines provided by the Administrator under section 108(g)(2) (relating to inventories).

"(b) IMPLEMENTATION OF CURRENT REQUIREMENTS.—Each State containing an ozone nonattainment area or portion thereof shall—

"(1) not later than eighteen months after the date of enactment of this subpart, fully implement all provisions of any implementation plan for the attainment of the ozone air quality standard for each such area or areas which have been approved by the Administrator prior to the date of enactment of this subpart, and

"(2) within six months after the date of enactment of this subpart, submit a revision or revisions to the applicable implementation plan to include provisions to correct requirements in (or add requirements to) the plan concerning reasonably available control technology as were required under section 172(b) (as in effect immediately before the date of enactment of this subpart), including a requirement to implement within one year after submission reasonably available control technology with respect to all sources of volatile organic compounds in such area or areas covered by a control technique guideline issued before the date of enactment of this subpart.

"(c) PERMIT REQUIREMENT.—

"(1) Each State containing an area or portion thereof classified pursuant to section 181(a) or subsequently classified pursuant to section 107 and this subpart shall, not later than eighteen months after the date of such classification submit to the Administrator a revision to the implementation plan for each such area requiring an operating permit as provided in sections 172(a)(6) and 173(b) for each new or existing major stationary source of volatile organic compounds or oxides of nitrogen located within any such nonattainment area. It shall be unlawful to operate any such major stationary source without a permit issued pursuant to an approved implementation plan beginning thirty-six months after the date of enactment of this subpart.

"(2) For the purpose of satisfying the permit program requirement of section 173(c) (pertaining to offsets), the ratio of volatile organic compounds emissions reductions to increased emissions of such compounds in serious nonattainment areas shall be at least 1.5 to 1 and in severe and extreme nonattainment areas, 2 to 1.

"(d) AUTO REGISTRATION LANGUAGE.—Each State containing an area classified pursuant to section 181(a) or subsequently classified pursuant section 107 and this subpart shall, not later than eighteen months after such classification, submit to the Administrator a revision to the implementation plan for each such area providing for the collection of a fee beginning not later than six months after such date of not less than $2.00 for each vehicle registered within such nonattainment area. Such fees shall be collected by the air pollution control agency with primary authority over such sources (as determined pursuant to section 174(a)) and used to develop and implement air pollution control programs pursuant to section 110 and this part. If the Administrator determines that the fee provisions of the applicable implementation do not meet the requirements of this subsection or if the Administrator determines that such agency is not administering and enforcing the fee required under this subsection, the Administrator shall collect such fees, which, notwithstanding section 3302(b) of title 31, United States Code, shall be deposited into a special fund of the Treasury and shall thereafter be available for appropriation to the Environmental Protection Agency to carry out activities under this Act.

### "REQUIREMENTS FOR SPECIFIC CLASSES OF OZONE NONATTAINMENT AREAS

"SEC. 183. (a) REQUIREMENTS FOR MODERATE AREAS.—Each State containing an area classified as a moderate nonattainment area pursuant to section 181(a) or subsequently so classified pursuant to section 107 of this subpart, shall, with respect to the moderate area, submit to the Administrator, by the dates provided, the following revisions to the applicable implementation plan:

"(1) within one year of the date of classification, a revision that requires implementation, within one year of submission of such revision, of requirements in either paragraph (A) or (B)—

"(A) an enhanced vehicle emissions control inspection and maintenance program to reduce in-use emissions of volatile organic compounds and oxides of nitrogen from motor vehicles, which program shall achieve a reduction in emissions of volatile organic compounds of at least 4700 tons per million vehicles covered and shall include each of the following elements—

"(i) require coverage of all light-duty vehicles registered in, at a minimum, each metropolitan statistical area (as defined by the Office of Management and Budget) with a population of 100,000 or more according to the 1980 Census,

"(ii) direct inspection of components of vehicle emission control systems (including evidence of misfueling) and, where such components have been rendered inoperative, the repair or replacement of such components,

"(iii) computerized emission analyzers,

"(iv) if a provision waiving the requirements for repairing the emission control system in the event of failure is included, a provision that such waiver shall apply only when the costs of repair exceed $200,

"(v) enforcement through denial of vehicle registration (except for any program in operation prior to the effective date of this section whose enforcement mechanism is demonstrated to the Administrator to be more effective than the applicable vehicle registration program in assuring that noncomplying vehicles are not operated on public roads), and

"(vi) any requirements the Administrator may prescribe under section 202(j)(3) (pertaining to onboard emission diagnostic systems), or

"(B) a requirement that all persons within the area transferring gasoline to a motor vehicle fuel tank from a gasoline dispensing system use a fill nozzle designed to (i) prevent discharge of hydrocarbon vapors into the ambient air, (ii) direct vapor displaced from the automotive fuel to a system where organic compounds in the displaced vapor are recovered, and (iii) prevent vehicle fuel tank overflows or spillage on fill nozzle disconnect. The requirement of this subparagraph shall apply only to facilities which sell more than 20,000 gallons of gasoline per month. The Administrator may revise or waive the requirements of this subparagraph, as appropriate, after such time as the Administrator determines that onboard emissions control systems required under this Act are in widespread use throughout the motor vehicle fleet.

Any area which is already operating a vehicle emission control inspection and maintenance program or for which the implementation plan, as of the date of enactment of this subpart, includes a specific schedule for implementation of such a program shall comply with subparagraph (A);

"(2) a revision requiring each major stationary source of emissions of volatile organic compounds located in the nonattainment area to pay an annual fee, beginning with the calendar year following the date of classification, of $25 per ton of volatile organic compounds and oxides of nitrogen emitted. Such fee shall be collected by the air pollution control agency with primary authority over such source (as determined pursuant to section 174(a)) and used to implement air pollution control programs pursuant to section 110 and this part. If the Administrator determines that the fee provisions of the applicable implementation plan do not meet the requirements of this paragraph or if the Administrator determines that such agency is not administering and enforcing the fee required under this paragraph, the Administrator shall collect such fees, which, notwithstanding section 3302(b) of title 31, United States Code, shall be deposited into a special fund of the Treasury and which shall thereafter be available for appropriation to carry out to the Environmental Protection Agency activities under this Act;

"(3) an ozone nonattainment area for which the design value is less than .13 parts per million in the year immediately preceding enactment of this subpart shall not be required to comply with the requirements of subsection (a)(1) (pertaining to inspection and maintenance and refueling programs) unless such compliance is otherwise needed to bring the area into attainment with the primary ambient air quality standard for ozone by the date specified in section 181(c). The design value shall be calculated according to the interpretation methodology issued by the Environmental Protection Agency most recently before the date of enactment of this subpart.

"(b) REQUIREMENTS FOR SERIOUS AREAS.—For the purposes of requirements applicable to areas under subsection (c) and this subsection and sections 172 and 173, major stationary sources or major emitting facilities of volatile organic compounds are sources or facilities that produce or have the potential to produce 25 tons or more per year of such compounds. Each State containing an area classified as a serious area pursuant to section 181(a) or subsequently so classified pursuant to section 107 and this subpart shall, with respect to the serious area, make the submissions described under subsection (a) and in addition submit to the Administrator the following revisions to the applicable implementation plan and other items:

"(1) an inventory that meets the requirements of section 182(a)(1) and, where all or part of such area is in a metropolitan statistical area (MSA) or consolidated metropolitan statistical area (CMSA), includes emissions from all sources within such MSA or CMSA, whichever is applicable, plus the twenty-five-mile radius around such area;

"(2) no later than one year after the date of classification, a revision to provide for, and a demonstration that the plan as revised will provide for, within three years after classification, emissions reductions of volatile organic compounds of 12 per centum from actual emissions in the calendar year of classification. Emissions reductions that will occur by the applicable deadline from measures required under either the applicable implementation plan or rules promulgated by the Administrator (other than rules promulgated under section 211(h)) may be credited toward the required 12 per centum reduction;

"(3) no later than three years from the date of classification a revision which demonstrates, based on photochemical grid modeling or any other analytical method determined by the Administrator, in the Administrator's discretion, to be at least as effective, that the plan, as revised—

"(A) will provide for attainment by the applicable attainment date; and

"(B) will result in volatile organic compound emission reductions from emissions reported in the initial inventory required under section 182(a)(1) equal to 12 per centum, averaged over each consecutive three-year period beginning with the fourth year after the date of classification, and extending until the area attains the primary ambient air quality standard for ozone. Such demonstration shall explicitly quantify projections with respect to emissions and necessary emission reductions from motor vehicles, using estimates for growth in vehicle miles traveled, congestion levels, and other relevant parameters that are used by the agency or agencies responsible for transportation planning for the area. Emissions reductions may be credited towards the 12 per centum reduction requirement to the extent they will occur by the applicable deadline from measures required under either the applicable implementation plan or rules promulgated by the Administrator (other than rules promulgated under section 211(h)). Any area that achieves an actual reduction in emissions in excess of that required by this subparagraph, as determined by the Administrator, may credit such excess emissions reductions toward the next three-year reduction requirement period;

"(4)(A) beginning one year after the date of classification, annual reports on measures adopted or implemented during the preceding calendar year and any failure to implement measures scheduled for implementation during such year;

"(B) Beginning with the fourth such report and in each third such report thereafter, the State shall demonstrate whether current vehicle miles traveled, congestion levels and other relevant parameters are consistent with those used for the demonstration required in paragraph (2) or for emissions projections pursuant to paragraph (3)(B)(i). Where such parameters and emissions levels exceed the levels projected for purposes of the area's three-year emissions reduction demonstration, the State shall, within one year, develop and submit a revision to the applicable implementation plan that includes a transportation control measures program consisting of measures from, but not limited to, section 108(f) that will reduce emissions to levels that are consistent with emission levels projected in such demonstration. Such revision shall be developed in accordance with guidance issued by the Administrator pursuant to section 108(e) and with the requirements of section 174(b) and shall include implementation and funding schedules that achieve expeditious emissions reductions in accordance with implementation plan projections;

"(5) within one year of the date of classification, a revision that satisfies the requirements of subparagraphs (A) (pertaining to vehicle inspection and maintenance) and (B) (pertaining to vapor recovery during vehicle fueling) of subsection (a)(1);

"(6) within one year after the date of classification, a revision that contains a permit program which meets the requirements of section 172(a)(6) and section 173, except that for the purpose of satisfying the requirement of section 173(c) (pertaining to offsets) with respect to emissions of volatile organic compounds, the ratio of emissions reductions to increased emissions shall be at least 1.5 to 1;

"(7) a revision that complies with subsection (a)(2) (pertaining to annual emissions fee) except that the revision shall require that the annual fee shall be $100 per ton of volatile organic compounds and oxides of nitrogen emitted, and that if the emissions reductions required pursuant to paragraphs (2) or (3)(B) are not achieved in the area by the dates required by such paragraphs, the fee shall increase to $500 per ton until such time as the required emissions reductions in the area are achieved;

"(8) within twelve months of classification, a revision to require implementation of reasonably available control technology for all stationary sources of volatile organic compounds that are not covered by a control technique guideline or listed pursuant to section 185(a) and that have the potential to emit 25 tons or more of such compounds and for all stationary sources of oxides of nitrogen that have the potential to emit 100 tons or more per year of such pollutant. Such revision shall require the implementation of such technology no later than two years after classification and, in the case of volatile organic compounds, shall provide that reductions of 80 per centum or more from uncontrolled levels be achieved unless the State determines for a category of sources that such level of reductions is not technologically or economically feasible, in which case the required reduction shall be the maximum that is technologically and economically feasible;

"(9) within one year of the date of classification, a revision that provides that if the area has failed to attain the primary ozone air quality standard by the deadline applicable to the area pursuant to section 181, each major stationary source of volatile organic compounds located in the area shall pay a fee for each calendar year until such standard is attained of $5,000 per ton (to be adjusted annually for inflation consistent with changes in the Consumer Price Index) of volatile organic compounds actually emitted during each such calendar year in excess of 50 per centum of such compounds actually emitted (as reported in the statement required by section 182(a)(2)) in the calendar year such area was to have attained the primary ozone air quality standard.

"(c) REQUIREMENTS FOR SEVERE AREAS.—Each State containing an area classified as a severe area pursuant to section 181(a) or subsequently so classified pursuant to section 107 and this subpart shall, with respect to the severe area, comply with the requirements of subsections (a) and (b) and in addition submit to the Administrator the following revisions to the applicable implementation plan and other items:

"(1) a revision to the applicable implementation plan that meets the requirements of subsection (b)(7) (pertaining to permit programs), except that the permit program shall require the ratio of volatile organic compound emissions reductions to increased emissions of such compounds to be at least 2 to 1;

"(2) a revision that complies with subsection (a)(2) (pertaining to annual emissions fees) except that the revision shall require that the annual fee shall be $250 per ton of volatile organic compounds and oxides of nitrogen emitted, and that if the emissions reductions required pursuant to paragraphs (b)(2) or (b)(3)(B) are not achieved in the area by the dates required by such paragraphs, the fee shall increase to $500 per ton until such time as the required emissions reductions in the area are achieved;

"(3) within two years after the date of classification, a revision that identifies and adopts specific enforceable strategies and transportation control measures to offset any growth in emissions from growth in vehicle miles traveled or numbers of vehicle trips in such area and to attain reduction in motor vehicle emissions as necessary, in combination with other emission reduction requirements of this subpart, to comply with the requirements of subsection (b)(3)(B) (pertaining to periodic three-year emission reduction requirements). The State shall consider, at a minimum, measures specified in section 108(f) and if the State fails to include any such measure, the implementation plan shall contain an explanation of why such measure was not adopted and what emissions reduction measure was adopted to provide a comparable reduction in emissions;

"(4) within one year after the date of classification, a revision requiring employers in such area to implement programs to reduce work-related vehicle trips and miles traveled by employees. Such revision shall be developed in accordance with guidance issued by the Administrator pursuant to section 108(f) and shall, at a minimum, require that each employer of one hundred or more persons increase average passenger occupancy per vehicle in commuting trips between home and the workplace during peak travel periods by not less than 20 per centum above the average vehicle occupancy for all such trips in the area at the time the revision is submitted. The revision shall also provide that any employer subject to the vehicle occupancy requirement which does not achieve the required vehicle occupancy rate increase within two years after the date the revision is submitted shall be liable to the State for payment of a fee of not less than $50 per month for each employee parking space provided or subsidized by such employer. Any revenue received by a State pursuant to this paragraph may only be spent to develop or implement an air pollution control program as required by section 110 and this part.

"(d) REQUIREMENTS FOR EXTREME AREAS.—

"(1) When all or part of an extreme area is in a metropolitan statistical area (MSA) or consolidated metropolitan statistical area (CMSA), the boundaries of the extreme area for the purposes of this subpart shall be defined, by operation of law, as the boundary of such MSA or CMSA, as applicable, plus twenty-five miles.

"(2) For the purpose of requirements applicable to extreme areas under this subsection and sections 172 and 173, major stationary sources or major emitting facilities of volatile organic compounds are sources or facilities that produce or have the potential to produce ten tons or more per year of such compounds.

"(3) Each State in which an extreme area or portion thereof is located shall, with respect to the extreme area, comply with the requirements of subsection (a), (b) and (c) and in addition submit to the Administrator revisions to the applicable implementation plan that complies with subsection (a)(2) (pertaining to emission fees) except that the annual fee shall be $500 per ton of volatile organic compounds and oxides of nitrogen emitted.

"(e) CERTAIN NON-SELF-GENERATING AREAS.—

"(1) Notwithstanding any other provision of section 181 or this section, a State containing an ozone nonattainment area that does not include and is not adjacent to any part of a metropolitan statistical area or, where one exists, a consolidated metropolitan statistical area (as defined by the Office of Management and Budget), which area is determined by the Administrator to be non-self-generating within the meaning of paragraph (2), shall be treated by operation of law as satistying the requirements of this section if it complies with regulations promulgated by the Administrator. Such regulations shall be promulgated no later than January 1, 1991, and shall, at a minimum, require compliance with the provisions of section 182 and such other measures as the Administrator determines appropriate to provide for the attainment and maintenance of the national ambient air quality standard for ozone.

"(2) The Administrator may determine an ozone nonattainment area to be non-self-generating if the Administrator finds that sources of volatile organic compounds and oxides of nitrogen emissions within the area do not make a significant contribution to the ozone concentrations measured in the area or in other areas.

### “FAILURE TO COMPLY OR ATTAIN

“SEC. 184. (a) FAILURE TO SUBMIT AN APPROVABLE PLAN.—Whenever a State fails to make a plan submission or revision required for a nonattainment area within such State under this subpart, or a Administrator disapproves such plan or revision in whole or significant part, the Administrator—

“(1) shall, with respect to such area, impose the prohibition of section 176(a)(1) (pertaining to new source construction);

“(2) shall notify the Secretary of Transportation who shall impose the prohibition of section 176(a)(2) (pertaining to transportation funding); and

“(3) may withhold funds as provided under section 176(a)(3) (pertaining to air pollution control program grants).

“(b) FAILURE TO IMPLEMENT A PLAN.—Whenever any requirement of an approved plan (or approved part of a plan) is not being implemented, the Administrator, with respect to the area (or areas) in which such requirement is not being implemented—

“(1) shall impose the prohibition of section 176(a)(1) (pertaining to new source construction);

“(2) shall notify the Secretary of Transportation who shall impose the prohibition of section 176(a)(2) (pertaining to transportation funding); and

"(3) may withhold funds as provided under section 176(a)(3) (pertaining to air pollution control program grants).

"(c) FAILURE TO ACHIEVE REQUIRED EMISSIONS REDUCTIONS.—

"(1) Whenever an ozone nonattainment area fails to achieve the emissions reductions required under section 183(b) (2) or (3)(B), the Administrator shall—

"(A) impose the prohibition of section 176(a)(1) (pertaining to new source construction) and shall notify the Secretary of Transportation who shall impose the prohibition of section 176(a)(2) (pertaining to transportation funding);

"(B) perform an annual audit, until such area achieves the required emissions reductions, of the plan and its implementation in such area to determine the reasons the plan is not achieving the required reductions; and

"(C) assure that the provisions of the implementation plan required by subsections 183(b)(8) and (c)(2) (pertaining to increased emission fees) are enforced.

"(2) Whenever an ozone nonattainment area fails to achieve the emissions reductions required under section 183(b) (2) or (3)(B), the Administrator may, in the Administrator's discretion—

"(A) lower the quantity of emissions of volatile organic compounds or oxides of nitrogen, or both, that, for such area, defines a source as a major stationary source;

"(B) require, in the case of an area listed as serious under section 181(a), that such area comply with the provisions of section 183(c) (relating to severe areas) and in the case of an area listed as severe under section 181(a), that such area comply with the provisions of section 183(d) (relating to extreme areas).

"(d) FAILURE TO ATTAIN.—For any ozone nonattainment area that fails to attain the primary ozone air quality standard by the date applicable to such area pursuant to section 181, the Administrator shall—

"(1) in the case of a moderate area reclassify such area as a serious area, in the case of a serious area, reclassify such area as a severe area, and in the case of a severe area, reclassify such area as an extreme area. From the date of reclassification each such area shall be subject to the provisions of this subpart, including the attainment date, that are applicable to the classification to which the area has been reclassified; and

"(2) in the case of a serious, severe, or extreme area, assure that the provisions of the implementation plan required by section 183(b)(9) (pertaining to emissions fees for major stationary sources) are enforced.

### "ADDITIONAL FEDERAL MEASURES TO CONTROL OZONE POLLUTION

"SEC. 185. (a) CONTROL TECHNIQUES GUIDELINES.—

"(1) Not later than six months after the date of enactment of this subpart, the Administrator shall publish a list of at least twelve categories of stationary sources for which control technique guidelines, in accordance with subsection 108(b), have not previously been published and which the Administrator considers to make the most significant contribution to the formation of ozone air pollution. The categories shall be divided into three groups (with an equal number of categories in each group) and the Administrator shall establish a schedule for publication of guidelines for each of such groups at the time of publication of the list of categories.

"(2) The Administrator shall publish control technique guidelines for sources within the categories listed under paragraph (1). The guidelines shall be published for the first group of such sources within the first eighteen months after publication of the list and for at least one additional group in each succeeding eighteen-month period until guidelines have been published for all listed categories.

"(3) Within thirty-six months after the date of enactment of this subpart, and every four years thereafter, the Administrator shall review and, if necessary, update control technology guidelines including those issued before the enactment of this subpart. The Administrator may publish such additional guidelines as the Administrator deems necessary.

"(b) VOLATILE ORGANIC COMPOUNDS EMISSIONS FROM LOADING AND UNLOADING OF CERTAIN VESSELS.—Within two years after the enactment of this subpart, the Administrator shall publish a control technique guideline, in accordance with section 108(c), regarding control of volatile organic compound emissions from the loading or unloading of petroleum products on to or from vessels. Such emissions shall be considered to be direct emissions of the onshore terminal for all purposes under this Act.".

"(c) CONSUMER OR COMMERCIAL PRODUCTS.—

"(1) Within two years after the date of enactment of this subpart, the Administrator shall submit to the Congress a final report on emissions of ozone precursors from consumer products which emit significant quantities of ozone precursors, and include recommendations for the control of such emissions.

"(2)(A) Within one year of submission of the report required under paragraph (1), the Administrator shall propose, and within two years of such submission shall promulgate, regulations to aid in the attainment of the ozone ambient air quality standard by decreasing emissions of ozone precursors from classes or categories of consumer or commercial products. Such regulations shall be designed to achieve reductions from the selected product categories to a level equal to the level that would be achieved by the application of reasonably available controls to each such class or category of consumer or commercial products and shall, at a minimum, achieve, within three years after promulgation, reductions in nationwide emissions of volatile organic compounds of three per centum below the level of such emissions in the calendar year of enactment of this subpart.

"(B) Such regulations may include any system or systems of implementation as the Administrator may deem appropriate, including but not limited to requirements for registration and labeling, self-monitoring and reporting, prohibitions, limitations, or fees concerning the manufacture, processing, distributions, use, consumption, or disposal of the product.

"(C) The regulations may exempt health-use products for which the Administrator determines there are not suitable substitutes.

"(D) Any fees collected under such regulations shall be deposited in a special fund in the United States Treasury which shall thereafter be available for appropriation, to remain available until expended, to carry out activities of the Environmental Protection Agency under this Act.

"(3) Any standard established under this subsection shall be treated, for purposes of sections 113, 114, 115, 120, and 304, as a standard under section 111.

"(4) The Administrator may, pursuant to regulations, delegate to any State that so requests, administration and enforcement of the regulations promulgated under paragraph (2).

"(5) For the purposes of this subsection—

"(A) the term 'reasonably available controls' means the degree of emissions reduction that the Administrator determines, on the basis of technological and economic feasibility, health, environmental, and energy impacts, is reasonably achievable through the application of any equipment, processes, systems or techniques, including, but not limited to, chemical reformulation, product or feedstock substitution, repackaging, or directions for use, consumption, storage, or disposal;

"(B) the term 'consumer or commercial products' means any substance, product, or article (including any container or packaging) held by any person, the use, consumption, storage, disposal, destruction, or decomposition of which may result in the release of ozone precursors. The term does not include fuels or fuel additives as defined under section 211; and

"(C) the term 'ozone precursors' means pollutants that contribute to the ambient air concentrations of ozone.

### "CONTROL OF INTERSTATE OZONE AIR POLLUTION

"SEC. 186. (a) OZONE TRANSPORT REGIONS.—The area comprising the States of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Virginia, and the consolidated metropolitan statistical area including the District of Columbia is established as an ozone transport region. The Administrator may add any State or portion of a State to any region established under this subsection or establish other ozone transport regions, consisting of two or more States, when the Administrator determines that the interstate transport of air pollutants from such State or States significantly contributes to concentrations of ozone or ozone precursors in any nonattainment area in another State classified under section 181(a) as a serious, severe, or extreme area for ozone. The ozone transport commission established under subsection (b) for any ozone transport region may remove any State or portion of a State from the region if the commission determines that the control of emissions in that State or portion of a State pursuant to this section will not significantly contribute to the attainment of the primary ambient air quality standard for ozone in any nonattainment area.

"(b) OZONE TRANSPORT COMMISSIONS.—Not later than six months after enactment of this subpart, the Administrator shall establish an ozone transport commission for the ozone transport region established by the first sentence of subsection (a). Not later than three months after the establishment of any other ozone transport region, the Administrator shall establish an ozone transport commission for the region. Each ozone transport commission shall be comprised of the following members—

"(1) an air pollution control official representing each State in the region, appointed by the Governor or as provided under State law;

"(2) the Administrator (or an employee designated by the Administrator from the headquarters office of the Environmental Protection Agency); and

"(3) the Regional Administrator (or an employee designated by the Regional Administrator) for each Environmental Protection Agency regional office for each Environmental Protection Agency region affected by the ozone transport region concerned.

Decisions of each ozone transport commission may be made only by a majority vote of all members other than the Regional Administrators (or designees thereof).

"(c) PLAN PROVISIONS FOR STATES IN OZONE TRANSPORT REGIONS.—Not later than two years after the enactment of this subpart (or nine months after the subsequent inclusion of a State in an established ozone transport region), each State included within an ozone transport region shall submit a State implementation plan or revision thereof to the Administrator which requires the following—

"(1) that each area in such State that is in an ozone transport region, that is not a nonattainment area, and that is a metropolitan statistical area or part thereof with a population of 100,000 or more, comply with the provisions of section 183(a)(1)(A) (pertaining to vehicle inspection and maintenance programs); and

"(2) that each major stationary source of volatile organic compounds within such State comply with the requirements of section 182(b)(2) (relating to reasonably available control technology).

"(d) ADDITIONAL CONTROL MEASURES.—Upon petition of any State within an ozone transport region, the commission may, after notice and opportunity for comment, require additional emissions control measures to be applied within such transport region if the commission determines such measures are necessary to bring all areas in such region into attainment by the dates provided by this subpart.

"(e) EXEMPT AREAS.—Upon petition of any State within an ozone transport region, the commission may exempt any area within such State from the requirements of subsection (c) if the State demonstrates to the satisfaction of the commission that stationary or mobile sources within the area do not contribute significantly to ozone concentrations in any area classified as serious, severe, or extreme for ozone. The commission shall make a determination under this paragraph within nine months following receipt of a petition. No State may submit a petition under this paragraph after the date one year after the enactment of this subpart (or more than one year after the date on which the State or portion thereof is included within an ozone transport region).

"(f) PETITIONS.—Any State or political subdivision may petition the Administrator to make a determination that any other State or portion thereof should be included within an ozone transport region under this section. The petitioning State shall include with such petition such evidence as is available to it regarding the contribution made by sources located in (or operating in) the State (or portion thereof) which is the subject of the petition to ozone concentrations in the petitioning State. Within one hundred and twenty days after receipt of any petition under this subsection and after public hearing, the Administrator shall include the State (or portion thereof) within an ozone transport region or deny the petition.

"(g) BEST AVAILABLE AIR QUALITY MONITORING AND MODELING.—For purposes of this section, not later than six months after the enactment of subpart, the Administrator shall promulgate criteria for purposes of determining the contribution of sources in one area to concentrations of ozone in another area which is a nonattainment area for ozone. Such criteria shall require that the best available air quality monitoring and modeling techniques be used for purposes of making such determinations.".

## ADDITIONAL REQUIREMENTS FOR CARBON MONOXIDE NONATTAINMENT AREAS

SEC. 108. (a) NEW REQUIREMENTS FOR CARBON MONOXIDE NONATTAINMENT AREAS.—Part D of title I of the Clean Air Act is amended by adding the following new subpart after subpart 2:

### "Subpart 3—Additional Provisions Regarding Carbon Monoxide Nonattainment Areas

### "CLASSIFICATION OF CARBON MONOXIDE NONATTAINMENT AREAS

"SEC. 187. (a) CLASSIFICATION BY OPERATION OF LAW.—Each area which did not meet the national primary ambient air quality standard for carbon monoxide averaged over an eight-hour period as of the last calendar year ending before enactment of this subpart for which data are available is hereby classified by operation of law in one of the following categories based upon the percentage by which the standard was exceeded in that area:

| "Area classification | Percentage exceedance |
|---|---|
| Moderate | Not Greater than 55 per centum |
| Serious | Greater than 55 per centum. |

Any reference in this subpart to a "moderate nonattainment area" or a "serious nonattainment area" shall be considered a reference to a moderate or serious carbon monoxide nonattainment area as classified under this subsection (or as subsequently reclassified under this subpart). Any reference in this subpart to the "carbon monoxide air quality standard" shall be considered a reference to the national primary ambient air quality standard for carbon monoxide averaged over a eight-hour period.

"(b) DATA AND METHODS FOR CLASSIFICATION.—For purposes of calculating the percentage by which the carbon monoxide air quality standard is exceeded in any area—

"(1) the most recent monitoring data available shall be used; and

"(2) the same methods as are used under regulations of the Administrator for purposes of determining attainment of the standard shall be applicable.

Not later than thirty days after the date of enactment of this subpart the Administrator shall publish a notice identifying the percentage by which each area referred to in subsection (a) exceeds the carbon monoxide air quality standard and the classification of each area as moderate or serious.

"(c) DEADLINES FOR ATTAINMENT.—The following deadlines apply to the carbon monoxide nonattainment areas classified in accordance with subsection (a)—

| "Area Classification | Applicable attainment date (in years after enactment of this subpart) |
|---|---|
| Moderate | 5 years |
| Serious | 10 years. |

"(d) NEW STANDARD.—If the Administrator revises the carbon monoxide air quality standard after the enactment of this subpart, the Administrator shall, within six months after the revision, promulgate requirements applicable to all areas which have not attained the revised standard and shall require the submission of implementation plans or revisions to such plans for such areas within twenty-four months after the revision of the standard. Such requirements shall provide for controls which are not less stringent than the controls applicable to areas classified under subsection (a) and shall provide for attainment of such revised standard according to a schedule which is comparable to that specified in subsection (c).

### "REQUIREMENTS APPLICABLE TO ALL CARBON MONOXIDE NONATTAINMENT AREAS

"SEC. 188. (a) INVENTORIES.—Each State containing a nonattainment area classified pursuant to section 187(a) shall, not later than one year after the date of enactment of this subpart and every three years thereafter, submit an inventory of carbon monoxide emissions from stationary and mobile sources located within each such area as provided in the guidelines issued by the Administrator pursuant to section 108(g). The initial inventory shall report emissions occurring in the calendar year immediately preceding enactment of this section or the subsequent year. Any area subsequently classified nonattainment pursuant to section 107 and this subpart shall submit (and update as provided in this subsection) carbon monoxide emissions inventories beginning eighteen months after the date of classification. Guidance for inventory preparation published by the Administrator pursuant to section 108(g) shall contain factors for estimating carbon monoxide emissions from wood stoves and other small combustion sources.

"(b) MONITORING.—The enhanced monitoring program required by section 108(g) shall include the use of mobile monitors for carbon monoxide to determine the geographic extent of any nonattainment problem for such pollutant within an area. Monitoring pursuant to such guidelines shall be commenced in all areas classified pursuant to section 187(a) or subsequently pursuant to section 107 and this subpart not later than eighteen months after such classification. The Administrator may require through guidance or by rule the use of mobile monitoring devices for carbon monoxide in areas designated as attainment areas.

"(c) EXISTING COMMITMENTS.—

"(1) Not later than eighteen months after the date of enactment of this section each State containing an area classified nonattainment pursuant to section 187(a) shall fully implement all provisions of any implementation plan for the attainment of the carbon monoxide air quality standard for such area or areas which have been submitted to the Administrator for approval (whether or not approved) prior to the date of enactment of this section.

"(2) Each State containing an area classified pursuant to section 187(a) shall promptly and fully implement any additional measures not previously proposed by the State but required by subpart 1.

"(d) AUTO REGISTRATION FEE.—Each State containing an area classified pursuant to section 187(a) or which contains an area subsequently classified pursuant to section 107 and this subpart shall not later than eighteen months after such classification submit to the Administrator for approval a revision to the implementation plan for each such area providing for the collection of a fee beginning not later than six months after such date of not less than $2.00 for each vehicle registered within such nonattainment area or areas. The requirement of this section shall not be in addition to any similar fee requirement imposed on vehicle registrations in such area under subpart 2. If the Administrator determines that the fee provisions of the applicable implementation do not meet the requirements of this subsection or if the Administrator determines that such agency is not administering and enforcing the fee required under this subsection, the Administrator shall collect such fees, which, notwithstanding section 3302(b) of title 31, United States Code, shall be deposited into a special fund of the Treasury and shall thereafter be available for appropriation to the Environmental Protection Agency to carry out activities under this Act.

"(e) STATIONARY SOURCE EMISSIONS FEE.—Each State containing an area classified pursuant to section 187(a) or which contains an area subsequently classified pursuant to section 107 and this subpart shall not later than eighteen months after such classification submit to the Administrator a revision to the implementation plan for each such area providing for the collection of a fee beginning not later than six months after the date of submission to be imposed on the owner or operator of each major stationary source of carbon monoxide emissions located within such area. The fee shall be not less than $100 for each ton of carbon monoxide emissions allowed in the permit issued for each such source located within a moderate nonattainment area and not less than $250 per ton for each source located within a serious nonattainment area. The owner or operator of each such source shall be liable to the State for payment of such fee. The liability for fees to be paid under this subsection shall be in addition to liability for any similar fees imposed under other provisions of this Act. All revenues from any fee collected under this subsection shall be used by the State (or local pollution control agency) to develop and implement air pollution control programs pursuant to section 110 and this part.

"(f) PERMIT REQUIREMENT—

"(1) Each State containing an area classified pursuant to section 187(a) or which contains an area subsequently classified pursuant to section 107 and this subpart shall not later than eighteen months after the date of such classification submit to the Administrator for approval a revision to the implementation plan for each such area requiring an operating permit as provided in sections 172(a)(6) and 173(b) for each new or existing major stationary source of carbon monoxide emissions located within any such nonattainment areas. It shall be unlawful to operate a major source of carbon monoxide emissions without a permit issued pursuant to an approved implementation plan beginning thirty-six months after the date of enactment of this subpart.

"(2) Each permit issued pursuant to this subsection shall require the installation of continuous emission monitoring for carbon monoxide emissions from the source.

"(3)(A) For purposes of this part a major stationary source of carbon monoxide emissions is any stationary source located or to be located in a moderate nonattainment area which emits or has the potential to emit fifty tons or more of carbon monoxide per year or any such source located or to be located in a serious nonattainment area which emits or has the potential to emit twenty-five tons or more of carbon monoxide per year.

"(B) For the purpose of satisfying the requirement of 173(c) (pertaining to offsets) the ratio of emissions reductions to increased emissions in serious nonattainment areas shall be at least 1.5 to 1.

"(g) ATTAINMENT DEMONSTRATION AND MILESTONE.—

"(1) Each State containing a moderate or serious nonattainment area shall, after notice and opportunity for public comment but not later than twenty-four months after such area has been designated nonattainment, submit to the Administrator for approval revisions to the implementation plan for each such area which demonstrate, as provided in section 110 and this part, attainment of the carbon monoxide air quality standard by the deadline for attainment for such area or areas as provided in section 187(c).

"(2)(A) Notwithstanding the provisions of paragraph (1), revisions demonstrating attainment under this subsection shall not be required for any moderate nonattainment area for which the design value in the most recent calendar year immediately preceding enactment of this section did not exceed the carbon monoxide air quality standard by more than 10 per centum: *Provided*, That, within three months after the date of enactment of this subpart the Governor of such State submits to the Administrator a detailed statement of the measures to be undertaken in such area which will assure attainment of the carbon monoxide air quality standard by not later than thirty-six months after such date of enactment.

"(B) In the event that a moderate nonattainment area for which an attainment demonstration has not been submitted pursuant to subparagraph (A) does not attain the carbon monoxide air quality standard by the date thirty-six months after the date of enactment of this subpart, the State in which such area is located shall, after notice and opportunity for public comment, submit within an additional twelve-month period revisions to the implementation plan for the area making such demonstration and such area shall be subject to all of the requirements of this subpart applicable to moderate nonattainment areas including implementation of a vehicle inspection and maintenance program pursuant to subsection (i) and the deadlines for attainment established by section 187(c).

"(3)(A) Revisions demonstrating attainment submitted to the Administrator for approval under this subsection shall contain quantitative milestones to be achieved in each year in which an inventory is required under subsection (a) until the area is reclassified attainment and which demonstrate, as defined in section 171(1), reasonable further progress toward attainment by the date applicable to the area under section 187(c). Milestones proposed for inclusion in an implementation plan under this paragraph may be stated as—

"(i) reductions in vehicle miles traveled or vehicle trips in the nonattainment area, or both, during periods when the standard is likely to be violated;

"(ii) reductions in tons of emissions of carbon monoxide emitted annually in the nonattainment area;

"(iii) reductions in the design value for carbon monoxide averaged over an eight-hour period for the area;

"(iv) reductions in the number of exceedances of the national carbon monoxide air quality standard which would be expected to occur each year; or

"(v) any combination of the above.

"(4) Revisions demonstrating attainment submitted to the Administrator for approval under this subsection shall contain one or more contingency measures sufficient to reduce (singly or in combination) carbon monoxide emissions in the nonattainment area as reported in the most recent inventory by not less than 5 per centum for moderate nonattainment areas and not less than 10 per centum for serious nonattainment areas. The revisions shall provide for automatic implementation of the measures in the event the area does not attain the carbon monoxide air quality standard by the date applicable to the area as provided in section 187(c). Contingency measures may be implemented only in part if all measures are not necessary to assure attainment of such standard as determined by the Administrator. Implementation of contingency measures shall not be delayed by any extension granted pursuant to section 190(d)(1).

"(5) The Administrator may not approve any revisions submitted pursuant to this subsection unless such revisions taken as a whole convincingly demonstrate attainment by not later than the dates specified in section 187(c). Notwithstanding the provisions of this paragraph, the Administrator may order that any or all requirements contained in such revisions be implemented and enforced pending submission of additional revisions of the implementation plan which can be approved as demonstrating attainment of the carbon monoxide air quality standard by the dates applicable under section 187(c).

"(h) CONTINUING AUDITS OF IMPLEMENTATION PLANS.—

"(1) The Administrator shall conduct an audit of each implementation plan for carbon monoxide for each area designated nonattainment for the carbon monoxide air quality standard to determine whether the State (or local pollution control agency) is adequately implementing and enforcing each provision of the plan and achieving the milestones established pursuant to subsection (g). Audits shall be conducted not less frequently than every three years and shall be scheduled, to the extent practicable, in years immediately following the compilation of an inventory as provided by subsection (a).

"(2) If the Administrator finds that any provision required by section 110, section 172(a) (1) through (10), section 173 or this subpart is not being adequately implemented and enforced, the Administrator shall promptly notify the State in which the area is located and shall impose the sanctions required by section 190 until such time as full implementation is achieved.

"(3) If the Administrator finds that any milestone established pursuant to subsection (g) has not been achieved by the applicable date, the Administrator shall require the State in which the area is located to promptly submit revisions to its plan, including provisions which may be identified by the Administrator, assuring achievement of the milestone as expeditiously as practicable but not later than eighteen months after the date originally scheduled for achieving the milestone. The Administrator shall also impose the sanctions required by section 190 until such time as the milestone is achieved.

"(i) VEHICLE INSPECTION AND MAINTENANCE PROGRAM.—Each State containing an area classified nonattainment pursuant to section 187(a) or which contains an area subsequently classified nonattainment and which is required to submit revisions to the implementation plan for such area demonstrating attainment pursuant to subsection (g) shall, not later than one year after the date of such classification, submit a revision to the applicable plan providing for implementation of a vehicle inspection and maintenance program which achieves carbon monoxide emissions reductions of at least 52,000 tons per million vehicles inspected and includes each of the elements in clause (i) through (vi) of section 183(a)(1)(A).

"(j) OXYGENATED FUELS.—Revisions demonstrating attainment submitted pursuant to subection (g) shall contain provisions implementing and enforcing an oxygenated fuels program for each moderate or serious nonattainment area as provided in section 211(e).

### "REQUIREMENTS APPLICABLE TO SERIOUS CARBON MONOXIDE NONATTAINMENT AREAS

"SEC. 189. (a) TRANSPORTATION CONTROL MEASURES.—Revisions demonstrating attainment submitted pursuant to section 188(g) for any serious nonattainment area shall contain a commitment to implement as expeditiously as practicable each of the transportation control measures specified in section 108(f) or a statement of the reasons for not including such measure in such revisions and an identification of other measures which will be taken in the area to obtain carbon monoxide emissions reductions equal to or greater than those which would have been achieved by implementation of such measure or measures.

"(b) EMPLOYER RIDERSHIP PROGRAM.—Revisions demonstrating attainment submitted pursuant to section 188(g) for any serious nonattainment area shall contain provisions requiring employers located in such area to implement programs to reduce work-related trips and miles traveled by employees. Such revisions shall be developed consistent with guidance issued by the Administrator pursuant to section 108(f) and shall, at a minimum, require that each employer of one hundred or more persons increase average passenger occupancy per vehicle in commuting trips between home and the workplace during peak travel periods by not less than 20 per centum above the average vehicle occupancy for all such trips in the area at the time the revision is submitted. The revision shall also provide that any employer subject to the vehicle occupancy requirement which does not achieve the required occupancy rate increase within two years after the date the revision is submitted shall be liable to the State for payment of a fee of not less than $50 per month for each employee parking space provided or subsidized by such employer. Any revenue received by a State pursuant to this subsection may only be spent to develop or implement an air pollution control program as required by section 110 and this part.

### "FAILURE TO COMPLY OR ATTAIN STANDARD

"SEC. 190. (a) FAILURE TO SUBMIT AN APPROVABLE PLAN.—Whenever a State fails to make a plan submission or revision required for a nonattainment area within such State under this subpart, or the Administrator disapproves such plan in whole or significant part, the Administrator—

"(1) shall, with respect to such area, impose the prohibition of section 176(a)(1) (pertaining to new source construction);

"(2) shall notify the Secretary of Transportation who shall impose the prohibition of section 176(a)(2) (pertaining to transportation funding); and

"(3) may withhold funds as provided under section 176(b)(3) (pertaining to air pollution control program grants).

"(b) FAILURE TO IMPLEMENT A PLAN.—Whenever any requirement of an approved plan (or approved part of a plan) is not being implemented, the Administrator, with respect to the area (or areas) in which such requirement is not being implemented—

"(1) shall impose the prohibition of section 176(a)(1) (pertaining to new source construction);

"(2) shall notify the Secretary of Transportation who shall impose the prohibition of section 176(a)(2) (pertaining to transportation funding); and

"(3) may withhold funds as provided under section 176(a)(3) (pertaining to air pollution control program grants).

"(c) FAILURE TO ACHIEVE REQUIRED EMISSIONS REDUCTIONS.—Whenever a carbon monoxide nonattainment area fails to achieve emissions reductions or a milestone required under section 188(g), the Administrator shall impose the prohibition of section 176(a)(1) (pertaining to new source construction) and shall notify the Secretary of Transportation who shall impose the prohibition of section 176(a)(2) (pertaining to transportation funding).

"(d) FAILURE TO ATTAIN.—

"(1) The Administrator shall reclassify any moderate nonattainment area failing to attain, as provided in section 187(c), the carbon monoxide air quality standard by the date five years after the date of enactment of this subpart as a serious nonattainment area, and such area shall from the time of reclassification be subject to the provisions of this subpart applicable to serious nonattainment areas. The Administrator may grant a one-year extension of the attainment date established by section 187(c) for a moderate nonattainment area before reclassification provided that the State has fully implemented all provisions in the implementation plan for the area and the area has not exceeded the carbon monoxide air quality standard by more than 10 per centum in the two years prior to such date. Not more than two one-year extensions may be granted to any area under this subsection. Within twelve months of reclassification, the State shall submit to the Administrator for approval revisions to the implementation plan for such area as may be necessary to comply with the requirements for serious nonattainment areas.

"(2) In the case of an area classified as a serious nonattainment area in which the carbon monoxide air quality standard is not attained by the date provided in section 187(c), the State in which such area is located shall, after notice and opportunity for public comment, submit within twelve months after the applicable nonattainment date plan revisions which provide for attainment of the carbon monoxide air quality standard as provided in subsections (a)(2)(A)(i) and (e) of section 110, and, from the date of such submission until attainment, for an annual reduction in carbon monoxide emissions within the area of not less than 5 per centum of the amount of such emissions as reported in the most recent inventory prepared for such area.".

### ADDITIONAL REQUIREMENTS FOR PM-10 NONATTAINMENT AREAS

SEC. 109. (a) NEW REQUIREMENTS FOR PM-10 NONATTAINMENT AREAS.—Part D of title I of the Clean Air Act is amended by adding the following new subpart after subpart 3:

### "Subpart 4—Additional Provisions for PM-10 Nonattainment Areas

### "ATTAINMENT DEADLINES FOR PM-10 NONATTAINMENT AREAS

"SEC. 191. (a) DEADLINES FOR ATTAINMENT.—State implementation plans required for any PM-10 nonattainment area under this subpart shall demonstrate attainment as expeditiously as practicable but not later than the date five years after the date on which such area was designated nonattainment for PM-10. The attainment deadline for areas designated nonattainment pursuant to subparagraphs (A) or (B) of section 107(f)(4) shall not extend beyond December 31,

1993. The Administrator may extend the deadline applicable to any area under this subsection upon a showing by the State that—

"(1) attainment within five years is impracticable because measures or technology to reduce PM–10 emissions are not available;

"(2) the State will implement all reasonably available control measures including all measures described in any guidance issued by the Administrator pursuant to section 195; and

"(3) reasonable further progress toward attainment will be achieved and demonstrated at regular intervals until the attainment date as provided in section 192(e).

No extension provided under authority of this subsection may extend for a period beyond the date ten years after the date on which an area has been designated nonattainment.

"(b) New Standard.—If the Administrator revises the particulate matter air quality standard after the date of enactment of this subpart, the Administrator shall, within six months after such revision, promulgate requirements applicable to all areas which have not attained the revised standard and shall require the submission of implementation plans or revisions to such plans for such areas within twenty-four months after the revision of the standard. Such requirements shall provide for controls which are not less stringent than the controls applicable to areas designated nonattainment for PM-10 and shall provide for attainment of such revised standard.

### "REQUIREMENTS APPLICABLE TO PM-10 NONATTAINMENT

"SEC. 192. (a) INVENTORIES.—Each State containing an area designated nonattainment pursuant to section 107(f)(4) shall, not later than one year after the date of enactment of this subpart and every three years thereafter, submit an inventory of PM-10 (and PM-10 precursors) emissions from stationary and mobile sources located within each such area as provided in guidelines issued by the Administrator pursuant to section 108(g). Any area subsequently designated nonattainment pursuant to section 107 or this subpart shall submit (and update as provided in this subsection) such emissions inventories beginning eighteen months after the date of designation. Guidance for inventory preparation issued by the Administrator pursuant to section 108(g) shall contain factors for estimating PM-10 (and PM-10 precursors) emissions from area and natural sources.

"(b) APPROVED SIPS.—Nothing in this section shall be interpreted to require preparation and submission of plan revisions for areas for which the State has submitted and the Administrator has approved a plan revision pursuant to regulations promulgated on August 7, 1987 (52 Federal Register

29383) provided that such plan revisions otherwise meet the requirements of this subpart.

"(c) STATIONARY SOURCE EMISSIONS FEE.—Each State containing an area designated nonattainment for PM-10 pursuant to section 107(f)(4) or which contains an area subsequently designated nonattainment for PM-10 pursuant to section 107 or this subpart shall not later than eighteen months after such designation submit to the Administrator for approval a revision to the implementation plan for each such area providing for the collection of a fee beginning not later than six months after the date of submission to be imposed on the owner or operator of each major source of PM-10 or PM-10 precursor emissions located within such area. The fee shall be not less than $100 for each ton of PM-10 or PM-10 precursor emissions allowed in the permit issued for the source. The fee shall be not less than $250 per ton of PM-10 or PM-10 precursor emissions allowed in the permit for each source located in an area granted an extension for the attainment deadline pursuant to section 191(a). The owner or operator of the source shall be liable to the State for payment of such fee. The liability for fees imposed under this subsection shall be in addition to liability for any fees imposed under other provisions of this Act. All revenues from any fee collected under this subsection shall be used by the State (or local pollution control agency) to develop and implement air pollution control programs pursuant to section 110 and this part.

"(d) PERMIT REQUIREMENTS.—

"(1) Each State containing an area designated nonattainment for PM-10 pursuant to section 107(f)(4) or which contains an area subsequently designated nonattainment for PM-10 pursuant to section 107 or this subpart shall not later than eighteen months after the date of such designation submit to the Administrator for approval a revision to the implementation plan for each such area requiring an operating permit as provided in sections 172(a)(6) and 173(b) for each new or existing major source of PM-10 or PM-10 precursor emissions located within such areas. It shall be unlawful to operate a major source of PM-10 or PM-10 precursor emissions without a permit issued pursuant to an approved implementation plan beginning thirty-six months after the date of enactment of this subpart.

"(2) Each permit issued pursuant to this subpart shall require monitoring of PM-10 or PM-10 precursor emissions from the permitted source not less frequently than monthly. The owner or operator shall periodically (but not later than twenty-four hours after any violation is detected) report the results of such monitoring to the State in which the source is located.

"(3) For purposes of this part a major stationary source of PM–10 or PM–10 precursor emissions is any stationary source located or to be located in a PM–10 nonattainment area which emits or has the potential to emit fifty tons or more of PM–10 or pollutants which are precursors of PM–10 per year.

"(4) For purposes of satisfying the requirement of section 173(c) (pertaining to offsets) the ratio of emissions reductions to increased emissions in areas granted an extension of the attainment deadline pursuant to section 191(a) shall be at least 1.5 to 1.

"(e) ATTAINMENT DEMONSTRATION AND MILESTONES.—

"(1) Each State containing an area designated nonattainment pursuant to section 107 shall, after notice and opportunity for public comment but not later than twenty-four months after such designation, submit to the Administrator for approval revisions to the implementation plan for each such area which demonstrate attainment of the PM–10 air quality standard by the date provided in section 191(a).

"(2) Plan revisions demonstrating attainment submitted to the Administrator for approval under this subsection shall contain quantitative milestones which are to be achieved in each year in which an inventory is required under subsection (a) until the area is redesignated attainment and which demonstrate, as defined in section 171(l), reasonable further progress toward attainment by the date applicable under section 191(a).

"(3) If a State includes in a plan revision an attainment date for an area which is after the date five years after the date of enactment of this subpart, the State shall commit to implementing each of the guidelines for control technology and measures which the Administrator promulgates pursuant to section 194 for each class or category of PM-10 or PM-10 precursor emission sources in the area. If the Administrator promulgates guidelines which are applicable to such classes and categories of sources after the date on which a plan revision is required by this subsection, the State shall further revise its plan within one year after the promulgation of such additional guidelines to provide for prompt implementation.

"(4) Plan revisions demonstrating attainment submitted to the Administrator for approval under this subsection shall contain one or more contingency measures sufficient to reduce (singly or in combination) PM-10 or PM-10 precursor emissions in the nonattainment area as reported in the most recent inventory by not less than 10 per centum. The plan revision shall provide for automatic implementation of the contingency measures in the event the area does not attain the PM–10 air quality standard by the date established pursuant to section 191(a). Implementation of contingency measures shall not be delayed by any extension granted pursuant to section 193(d).

"(5) The Administrator may not approve any revisions submitted pursuant to this subsection unless such revisions taken as a whole convincingly demonstrate attainment by not later than the dates applicable under section 191(a). Notwithstanding the provisions of this paragraph, the Administrator may order that any or all requirements contained in a plan revision be implemented and enforced pending submission of additional revisions of the implementation plan which can be approved as demonstrating attainment of the PM–10 air quality standard by the dates applicable under section 191(a).

"(f) CONTINUING AUDITS OF IMPLEMENTATION PLANS.—

"(1) The Administrator shall conduct an audit of each implementation plan for PM–10 for each area designated nonattainment pursuant to section 107(f)(4) to determine whether the State (or local pollution control agency) is adequately implementing and enforcing each provision of the plan and achieving the milestones established pursuant to subsection (e). Audits shall be conducted not less frequently than every three years and shall be scheduled, to the extent practicable, in years immediately following the compilation of an inventory as provided in subsection (a).

"(2) If the Administrator finds that any provision required by section 110, subpart 1 or this subpart is not being adequately implemented and enforced, the Administrator shall promptly notify the State in which the area is located and shall impose sanctions required by section 193 until such time as full implementation is achieved.

"(3) If the Administrator finds that any milestone established pursuant to subsection (e) has not been achieved by the applicable date, the Administrator shall require the State in which the area is located to promptly submit revisions to its plan, including provisions which may be identified by the Administrator, assuring achievement of the milestone as expeditiously as practicable but not later than eighteen months after the date originally scheduled. The Administrator shall also impose the sanctions required in section 194 until such time as the milestone is achieved.

### “FAILURE TO COMPLY OR ATTAIN STANDARD

“SEC. 193. (a) FAILURE TO SUBMIT AN APPROVABLE PLAN.—Whenever a State fails to make a plan submission or revision required for a nonattainment area within such State under this subpart, or the Administrator disapproves such plan in whole or significant part, the Administrator—

“(1) shall, with respect to such area, impose the prohibition of section 176(a)(1) (pertaining to new source construction);

“(2) shall notify the Secretary of Transportation who shall impose the prohibition of section 176(a)(2) pertaining to transportation funding); and

“(3) may withhold funds as provided under section 176(b)(3) (pertaining to air pollution control program grants).

“(b) FAILURE TO IMPLEMENT A PLAN.—Whenever any requirement of an approved plan (or approved part of a plan) is not being implemented, the Administrator, with respect to the area (or areas) in which such requirement is not being implemented—

“(1) shall impose the prohibition of section 176(a)(1) (pertaining to new source construction);

“(2) shall notify the Secretary of Transportation who shall impose the prohibition of section 176(a)(2) (pertaining to transportation funding); and

"(3) may withhold funds as provided under section 176(a)(3) (pertaining to air pollution control program grants).

"(c) FAILURE TO ACHIEVE REQUIRED EMISSIONS REDUCTIONS.—Whenever a PM-10 nonattainment area fails to achieve emissions reductions of a milestone required under section 192(e), the Administrator shall impose the prohibition of section 176(a)(1) (pertaining to new source construction) and shall notify the Secretary of Transportation who shall impose the prohibition of section 176(a)(2) (pertaining to transportation funding).

"(d) FAILURE TO ATTAIN.—

"(1) The Administrator may, for any area, grant a one-year extension of the attainment date established pursuant to section 191(a) provided that—

"(A) the State has fully implemented all provisions in the implementation plan for the area;

"(B) the area does not exceed the PM-10 standard averaged annually; and

"(C) the area has not exceeded the PM-10 air quality standard averaged over twenty-four hours by more than 10 per centum in the two years prior to such date.

Not more than two one-year extensions my be granted pursuant to the authority of this subsection.

"(2) In the case of an area designated nonattainment pursuant to section 107(f)(4) in which the PM–10 standard is not attained by the date provided in section 191(a) (and considering any extension provided in subsection (a)), the State in which such area is located shall, after notice and opportunity for public comment, submit within twelve months after the applicable attainment date, plan revisions which provide for attainment of the PM–10 air quality standard as provided in subsections (a)(2)(A)(i) and (e) of section 110, and, from the date of such submission until attainment, for an annual reduction in PM–10 or PM–10 precursor emissions within the area of not less than 5 per centum of the amount of such emissions as reported in the most recent inventory prepared for such area.

### "GUIDELINES FOR PM–10 SOURCES

"SEC. 194. (a) INITIAL GUIDELINES.—Not later than eighteen months after the date of enactment of this section, the Administrator shall promulgate control technique guidelines with respect to reasonably available control technology and best available control technology for PM–10 (and PM–10 precursor) emissions from major stationary sources. At the same time, the Administrator shall publish guidelines with respect to reasonably available control measures and best available control measures for controlling PM–10 (and PM–10 precursor) emissions from area sources which cause or contribute to PM–10 nonattainment. At a minimum, guidelines published under this subsection shall include identification of technology and measures for combustion sources including wood smoke, prescribed burning for silviculture and agriculture and urban fugitive dust.

"(b) ADDITIONAL GUIDELINES.—Not later than six months after the date for submission of plans and plan revisions pursuant to section 192(e)(1), the Administrator shall publish a list of all other classes and categories of sources of PM–10 emissions which States have indicated will prevent attainment of the PM–10 air quality standard within five years after the date of enactment of this subpart because control technology is not available. Not later than forty-eight months after the date of enactment of this subpart, the Administrator shall publish control technique guidelines and guidelines for area sources (as provided in subsection (a)) for each such class or category.".

(b) PM–10 INCREMENTS IN PSD AREAS.—Section 166 of the Clean Air Act is amended by adding the following new subsection:

"(f) PM–10 INCREMENTS.—The Administrator is authorized to substitute, for the maximum allowable increases in particulate matter specified in section 163(b) and section 165(d)(2)(C)(iv), maximum allowable increases in particulate matter with an aerodynamic diameter smaller than or equal to ten micrometers. Such substituted maximum allowable increases shall be at least as stringent in effect as those specified in the provisions for which they are substituted. Until the Administrator promulgates regulations under the authority of this section, the current maximum allowable increases in concentrations of particulate matter shall remain in effect.".

OUTER CONTINENTAL SHELF ACTIVITIES

SEC. 110. Title III of the Clean Air Act is amended by adding the following new section after section 326:

"AIR POLLUTION FROM OUTER CONTINENTAL SHELF ACTIVITIES

"SEC. 327. (a) APPLICABLE REQUIREMENTS.—Not later than twelve months after the enactment of this section, the Administrator, by rule, shall establish requirements to control air pollution from Outer Continental Shelf sources ('OCS sources'). Such requirements shall be the same as would be applicable if the source were located in the corresponding onshore area. Such requirements shall take effect with respect to new or modified sources on the date of promulgation and with respect to existing sources on the date twelve months thereafter. The authority of this section shall supersede any inconsistent authorities established under other law. Each requirement established under this section shall be treated, for purposes of sections 113, 114, 116, 120, and 304, as a standard under section 111.

"(b) STATE PROCEDURES.—Each State adjacent to an OCS source may develop and submit to the Administrator a procedure for implementing and enforcing the requirements promulgated by the Administrator under subsection (a) for OCS sources. If the Administrator finds that the State procedure is adequate he shall delegate to that State any authority he has under this Act to implement and enforce such requirements.

"(c) DEFINITIONS.—For purposes of this section—

"(1) The term 'Outer Continental Shelf' has the meaning provided by section 2 of the Outer Continental Shelf Lands Act (43 U.S.C. 1331).

"(2) The term 'corresponding onshore area' means, with respect to any OCS source, the onshore attainment or nonattainment area that is closest to the source, unless the Administrator determines that another area with more stingent requirements may reasonably be expected to be affected by such emissions. Such determination shall be based on the potential for air pollutants from the OCS source to reach the other onshore area and the potential of such air pollutants to affect the efforts of the other onshore area to attain or maintain any Federal, State, or local ambient air quality standard or to comply with the provisions of part C.

"(3) The terms 'Outer Continental Shelf Source' and 'OCS source' includes any equipment, activity, or facility which (A) emits or has the potential to emit any air pollutant, (B) is regulated or authorized under the Outer Continental Shelf Lands Act, and (C) is located on the Outer Continental Shelf or in or on waters above the Outer Continental Shelf. Activities include, but are not limited to, exploration, construction, development, processing, and transportation. Emissions from any vessel servicing or associated with an OCS source, including emissions while at the OCS source or en route to or from the OCS source and the corresponding onshore area, shall be considered emissions from that OCS source.".

INDIAN TRIBES

SEC. 111. Title III of the Clean Air Act is amended by adding the following at the end thereof:

"INDIAN TRIBES

"SEC. 328. (a) IN GENERAL.—Subject to the provisions of subsection (b), the Administrator—

"(1) is authorized to treat Indian tribes as States under this Act,

"(2) may delegate to such tribes primary responsibility for assuring air quality and enforcement of air pollultion control, and

"(3) may provide such tribes grant and contract assistance to carry out functions provided by this title.

"(b) EPA REGULATIONS.—

"(1) The Administrator shall, within eighteen months after the enactment of this section, promulgate final regulations specifying those provisions of this Act for which it is appropriate to treat Indian tribes as States. Such treatment shall be authorized only if—

"(A) the Indian tribe is recognized by the Secretary of the Interior and has a governing body carrying out substantial governmental duties and powers;

"(B) the functions to be exercised by the Indian tribe are within the area of the tribal government's jurisdiction; and

"(C) the Indian tribe is reasonably expected to be capable, in the Administrator's judgment, of carrying out the functions to be exercised in a manner consistent with the terms and purposes of this title and of all applicable regulations.

"(2) Indian tribes shall not be treated as States for purposes of the last sentence of section 105(c). For any other provision of this Act where treatment of Indian tribes as identical to States is inappropriate, administratively infeasible or otherwise inconsistent with the purposes of this Act, the Administrator may include in the regulations promulgated under this section, other means for administering such provision in a manner that will achieve the purpose of this section and such other provision. Nothing in this section shall be construed to allow Indian tribes to assume or maintain primary responsibility for assuring air quality and enforcement of air pollution control in a manner less protective of public health or welfare than such responsibility may be assumed or maintained by a State. An Indian tribe shall not be required to exercise criminal jurisdiction for purposes of complying with the proceeding sentence.".

MISCELLANEOUS AND CONFORMING AMENDMENTS

SEC. 112. (a) Section 106 of the Clean Air Act is amended by inserting—

(1) after "section 107" the following: "or of implementing section 186 (relating to control of interstate ozone air pollution)";

(2) after "program costs of" the following: "any commission established under section 186 (relating to control of interstate ozone air pollution) or"; and

(3) in the last sentence after "such agency" in each place it appears the following: "or such commission".

(b) Paragraph (5) of section 110(a) and paragraph (2) of section 110(c) are hereby repealed and subsequent paragraphs are redesignated accordingly.

## TITLE II—PROVISIONS RELATING TO MOBILE SOURCES

### EMISSIONS STANDARDS FOR CERTAIN MOTOR VEHICLES

SEC. 201. Section 202 of the Clean Air Act is amended by adding the following new subsection:

"(g) MODEL YEARS AFTER 1992.—(1) Effective with respect to the model years specified in tables 1 and 2 below, the regulations under subsection (a) applicable to emissions of nonmethane hydrocarbons (NMHC), total hydrocarbons (HC), oxides of nitrogen ($NO_x$), carbon monoxide (CO) and particulates (PM) from motor vehicles and motor vehicle engines in the classes specified in the tables shall contain standards which provide that emissions may not exceed the levels specified in the tables.

"TABLE 1.—EMISSIONS STANDARDS FOR GASOLINE AND DIESEL-FUELED LIGHT-DUTY VEHICLES

| Pollutant | Model years | Standards [1] |
|---|---|---|
| NMHC | 1993 through 2002 | 0.25 gpm. |
| HC | 1993 through 2002 | 0.31 gpm. |
| HC | 2003 and after | 0.125 gpm. |
| $NO_x$ | 1993 through 2002 | 0.4 gpm. |
| $NO_x$ | 2003 and after | 0.2 gpm. |
| CO | 2003 and after | 1.7 gpm. |
| PM | 1993 and after | 0.08 gpm. |

[1] Standards are expressed in grams per mile (gpm).

"Table 2.—Emission Standards for Gasoline and Diesel-Fueled Trucks and Buses

| Vehicle or engine type | Pollutant | Model years | Standard [1] |
|---|---|---|---|
| Trucks (3,750 lbs or more but less than 5,750 lbs, loaded vehicle weight) | NMHC | 1933 and after | 0.32 gpm. |
| | HC | 1993 and after | 0.38 gpm. |
| | $NO_x$ | 1993 and after | 0.7 gpm. |
| | CO | 1993 and after | 4.4 gpm. |
| Heavy duty trucks | $NO_x$ | 1994–2002 | 4.0 gbh. |
| | $NO_x$ | 2003 and after | 2.0 gbh. |
| | PM | 1991–93 | 0.25 gbh. |
| | PM | 1994 and after | 0.1 gbh. |

[1] Standards are expressed in grams per mile (gpm) or grams per brake horsepower hour (gbh).

"(2) Effective with respect to model years after 1992, any motor vehicle with a loaded vehicle weight of three thousand seven hundred and fifty pounds or less, as determined by the Administrator, shall be a light duty vehicle.".

### CARBON MONOXIDE EMISSIONS AT COLD TEMPERATURES

Sec. 202. Section 202 of the Clean Air Act is amended by adding the following new subsection:

"(h) Cold CO Standard.—The Administrator shall promulgate regulations under subsection (a) applicable to emissions of carbon monoxide from light duty vehicles and light duty trucks when operated at twenty degrees Fahrenheit. Such regulations shall contain standards which provide that, with respect to model years 1993 through 1999, emissions of carbon monoxide in the case of light duty vehicles may not exceed ten grams per mile and, in the case of light duty trucks, thirteen grams per mile. Such regulation shall also contain standards that provide that with respect to model year 2000 and thereafter, emissions of carbon monoxide in the case of light duty vehicles may not exceed three and four-tenths grams per mile, and, in the case of light duty trucks, four and four-tenths grams per mile.".

### CONTROL OF VEHICLE REFUELING EMISSIONS

SEC. 203. Section 202(a)(6) of the Clean Air Act is amended to read as follows:

"(6) The Administrator shall promulgate regulations applicable to all motor vehicles requiring that such vehicles be equipped with vehicle-based ('onboard') systems for control of evaporative emissions during refueling. Such regulations shall take effect, with respect to light duty vehicles, beginning in model year 1993, and, with respect to other vehicles, at the earliest date the Administrator determines is feasible, and shall require that such systems provide a minimum evaporative emission capture efficiency of 95 per centum.".

### EVAPORATIVE EMISSIONS

SEC. 204. Section 202 of the Clean Air Act is amended by adding the following new subsection:

"(i) EVAPORATIVE EMISSIONS.—Within eighteen months after the enactment of this subsection the Administrator shall promulgate regulations under subsection (a) applicable to evaporative emissions of hydrocarbons, including emissions during vehicle operation, from all gasoline-fueled motor vehicles. Such regulations shall take effect beginning in model year 1994 and shall require the greatest degree of emission reduction achievable by means expected to be available during any model year to which such regulations apply.".

### ONBOARD EMISSION DIAGNOSTIC SYSTEMS

SEC. 205. (a) Section 202 of the Clean Air Act is amended by adding the following new subsection:

"(j) ONBOARD EMISSION DIAGNOSTIC SYSTEMS—

"(1) Within 18 months after enactment of this subsection, the Administrator shall promulgate regulations under subsection (a) requiring manufacturers to install on all new light duty vehicles and light duty trucks diagnostic systems capable of—

"(A) accurately identifying emission-related systems deterioration or malfunction including, at a minimum, the catalytic converter and oxygen sensor, which could cause or result in failure of the vehicles to comply with emission standards established under this section,

"(B) alerting the vehicle's owner or operator to the likely need for emission-related components or systems maintenance or repair, "(C) providing access to stored information in a manner specified by the Administrator.

The Administrator may, in the Administrator's discretion, promulgate regulations requiring manufacturers to install such onboard diagnostic systems on heavy-duty vehicles and engines.

"(2) The regulations required under paragraph (1) with respect to light duty vehicles and light duty trucks shall take effect no later than model year 1994.

"(3) The Administrator may by regulation require States that have implementation plans containing motor vehicle inspection and maintenance programs to amend their plans within two years of promulgation of such regulations to provide for inspection of onboard diagnostic systems (as prescribed by regulations under paragraph (1) of this subsection) and the maintenance or repair of malfunctions or system deterioration identified by or affecting such diagnostic system.".

(b) The last sentence of section 207(a)(3) of the Clean Air Act is amended to read: "The term 'designed for emission control' as used in the preceding sentence means a catalytic converter, a thermal reactor, an onboard diagnostic system and items monitored or diagnosed by an onboard diagnostic system (as prescribed by regulations of the Administrator under section 202(j)), or other component installed on or in a vehicle for the sole or primary purpose of reducing vehicle emissions (not including those vehicle components which were in general use prior to model year 1968 and the primary function of which is not related to emission control).".

(c) The second to last sentence of section 207(b) of the Clean Air Act is amended to read: "For purposes of the warranty under this subsection, for the period after twenty-four months or twenty-four thousand miles (whichever first occurs) the term 'emission control device or system' means a catalytic converter, a thermal reactor, an onboard diagnostic system and items monitored or diagnosed by an onboard diagnostic system (as prescribed by regulations of the Administrator under section 202(j)), or other component installed on or in a vehicle for the sole or primary purpose of reducing vehicle emissions.".

### EMISSIONS OF CARBON DIOXIDE FROM PASSENGER CARS

SEC. 206. Title II of the Clean Air Act is amended by redesignating section 216 as section 219 and inserting the following new section after section 215:

### "EMISSIONS OF CARBON DIOXIDE FROM PASSENGER CARS

"SEC. 216. (a) PROMULGATION OF REGULATIONS.—The Administrator shall promulgate regulations providing for standards applicable to emissions of carbon dioxide from passenger automobiles (as defined in 15 U.S.C. 2001(2)). Such standards shall require that for model years 1995 to 2002, the average of such emissions from passenger automobiles manufactured by any manufacturer shall not exceed two hundred and forty two grams per mile, and for model year 2003 and thereafter, such average shall not exceed one hundred and seventy grams per mile.

"(b) APPLICATION OF OTHER PROVISIONS.—The standards under this section shall be subject to the provisions of section 202(d) relating to the determination of useful life, and to the same provisions of section 206 and section 207 as are applicable in the case of standards under section 202, and shall be enforced in the same manner as standards under section 202.".

## LOW-POLLUTING VEHICLES

SEC. 207. (a) DEFINITION OF LOW-POLLUTING FUEL.—Section 219 of the Clean Air Act (as redesignated by section 206) is amended by adding the following new subsection:

"(7) The term 'low polluting fuel' means methanol, ethanol, propane, or natural gas, or any comparably low-polluting fuel. In determining whether a fuel is comparably low-polluting, the Administrator shall consider both the level of emissions of air pollutants from vehicles using the fuel and the contribution of such emissions to ambient levels of air pollutants. For purposes of this subsection, the term 'methanol' includes any fuel which contains at least 85 per centum methanol unless the Administrator increases such percentage as he deems appropriate to protect public health and welfare.".

(b) STANDARDS AND RELATED REQUIREMENTS.—Section 202 of the Clean Air Act is amended by adding the following new subsection:

"(k) LOW-POLLUTING VEHICLES.—

"(1) Within eighteen months after the enactment of this subsection, the Administrator shall promulgate specific standards under subsection (a) for motor vehicles which burn low-polluting fuel. Such standards shall apply to the emission of carbon monoxide, formaldehyde, hydrocarbons, oxides of nitrogen, carbon dioxide, and such other air pollutants as the Administrator may identify as a potential threat to public health or welfare. The Administrator may establish different standards for vehicles powered by each of such fuels. Such standards shall take effect in the second model year commencing after the model year in which the standards are promulgated.

"(2) Any standard referred to in paragraph (1) shall require that each vehicle which burns a low-polluting fuel use the best available technology for the control of each air pollutant referred to in paragraph (1), taking costs into account. Such standard shall not permit emissions of any such air pollutant, including evaporative emissions, to exceed the standard applicable to emissions of such air pollutant from comparable gasoline powered vehicles under subsection (a) and shall require that such emissions contribute less to ozone formation.

"(3) Nothing in this subsection shall be construed to prevent the Administrator from certifying (under section 206) any motor vehicle having a multiple fuel capability or capable of burning a mixture of fuels if the vehicle meets the standards under this subsection for each such fuel which it is capable of burning.".

### LIGHT DUTY VEHICLE USEFUL LIFE

SEC. 208. Section 202(d)(1) of the Clean Air Act is amended to read as follows:

"(1)(A) in the case of light duty vehicles and light duty vehicle engines manufactured during or before the 1994 model year, be a period of use of five years or of fifty thousand miles (or the equivalent), whichever first occurs;

"(B) in the case of light duty vehicles and light duty engines manufactured in the model year 1995 and thereafter, be a period of use of ten years or one hundred thousand miles (or the equivalent), whichever first occurs.".

### WARRANTIES

SEC. 209. Section 207 of the Clean Air Act is amended as follows:

(a) strike out "useful life (as determined under section 202(d))" in each place it appears in subsection (b) and insert in lieu thereof "the warranty period (as determined under subsection (i))";

(b) strike so much of section 207(b) as follows the third sentence thereof;

(c) add the following new subsection at the end thereof:

"(i) WARRANTY PERIOD.—

"(1) For purposes of subsection (a)(1) and subsection (b), the warranty period, in the case of light duty vehicles and light duty vehicle engines manufactured during or before the 1994 model year shall be the useful life (as determined under section 202(d)). For the purposes of such subsections, the warranty period, in the case of such vehicles and engines manufactured during model year 1995 and thereafter, shall be the first two years or twenty-four thousand miles of use (whichever first occurs), except as provided in paragraph (2).

"(2) In the case of a specified major emission control component, the warranty period for purposes of subsection (a)(1) and subsection (b) shall be eight years or eighty thousand miles of use (whichever first occurs). As used in this paragraph, the term 'specified major emission control component' means only a catalytic converter or electronic emissions control unit, except that the Administrator may designate any other pollution control device or component as a specified major emission control component if—

"(A) the device or component (except in the case of onboard emission control diagnostic equipment required by section 216) was not in general use on vehicles and engines manufactured prior to the model year 1990; and

"(B) the Administrator determines that the retail cost (exclusive of installation costs) of such device or component exceeds $200 (in 1989 dollars, adjusted for inflation or deflation as calculated by the Administrator at the time of such determination).

Nothing in this Act shall be interpreted to mean that parts other than those specified by the Administrator as major emission control components shall be construed to be warranted under this Act for eight years or eighty thousand miles.

"(3) Subparagraph (A) of subsection (b)(2) shall apply only where the Administrator has made a determination that the instructions concerned conform to the requirements of subsection (c)(3)."; and

(d) amend subsection (a)(1) by adding the following at the end thereof: "In the case of vehicles and engines manufactured in the model year 1995 and thereafter such warranty shall require that the vehicle or engine is free from any such defects for the period of two years or twenty four thousand miles of use (whichever first occurs), except that for a specified major emission control component (as defined in subsection (i)) such warranty shall require that such component is free from any such defects for the period of eight years or 80,000 miles of use (whichever first occurs).".

### NON-ROAD ENGINES

SEC. 210. (a) DEFINITIONS.—Section 219 of the Clean Air Act (as redesignated by section 206 of this Act) is amended by adding the following new subsections:

"(8) The term 'non-road engine' means an internal combustion engine (including the fuel system) that is not used in a motor vehicle or which is not subject to standards promulgated under section 111 (pertaining to new stationary sources) or section 202 (pertaining to motor vehicles) or to regulation under Part B of this title (pertaining to aircraft emissions).

"(9) The term 'non-road vehicle' means a vehicle that is powered by a non-road engine and that is not a motor vehicle.".

(b) Subsection (1) of section 219 of the Clean Air Act (as redesignated by section 206) is amended by striking the phrase "new motor vehicles or new motor vehicle engines" every place it occurs and inserting in its place "new motor vehicles, new motor vehicle engines, new non-road vehicles or new non-road engines".

(c) The Clean Air Act is amended by adding a new section 217 as follows:

### "EMISSION STANDARDS FOR NON-ROAD ENGINES AND VEHICLES

"SEC. 217. (a) LIST OF CATEGORIES.—Not later than twelve months after the date of enactment of this section and after notice and opportunity for public comment the Administrator shall publish (and from time to time revise) a list of all categories of non-road engines and non-road vehicles together with estimates of the contribution of each category to ambient ozone and carbon monoxide levels in nonattainment areas and to total particulate levels.

"(b) EMISSION STANDARDS.—

"(1) The Administrator shall promulgate emission standards for non-road engines or non-road vehicles of fifty or more horse power in every category listed under subsection (a) and is authorized to promulgate standards for vehicles or engines of less than fifty horsepower.

"(2) Emission standards promulgated under this subsection shall, at a minimum, require that emissions of carbon monoxide, volatile organic compounds, oxides of nitrogen and particulates, from engines and vehicles covered by this section shall not be greater than the emissions of such air pollutants allowable under section 202 for motor vehicle engines of comparable horsepower using the same fuel, as determined by the Administrator. If there is not a standard for any of such air pollutants under section 202 for a motor vehicle engine of comparable horsepower using the same fuel, the Administrator shall establish standards under this section which are proportional to the standards applicable under section 202 to motor vehicle engines which are closest in horsepower and fuel use to the engine concerned.

"(c) Schedule for Standards.—The Administrator shall promulgate regulations required under subsection (b) as expeditiously as practicable, assuring that—

"(1) emissions standards for engines or vehicles of greater than fifty horsepower in at least one-third of the categories listed under subsection (a) are promulgated not later than three years after the date of enactment of this section;

"(2) emissions standards for such engines or vehicles in at least two-thirds of such categories are promulgated within four years after such date; and

"(3) emissions standards for such engines or vehicles in all such categories are promulgated no later than five years after such date.

"(d) EFFECTIVE DATE.—Each standard under this section shall take effect with respect to engines or vehicles to which the standard applies that are manufactured three years after such standard is promulgated.

"(e) ENFORCEMENT.—The standards under this section shall be subject to the same provisions of title II as are applicable in the case of standards under section 202, and shall be enforced in the same manner as the standards under section 202, with such modifications as the Administrator deems appropriate.".

## PROHIBITION ON PRODUCTION OF ENGINES REQUIRING LEADED GASOLINE

SEC. 211. The Clean Air Act is amended by adding a new section 218 as follows:

## "PROHIBITION ON PRODUCTION OF ENGINES REQUIRING LEADED GASOLINE

"SEC. 218. The Administrator shall promulgate regulations applicable to motor vehicle engines and non-road engines manufactured after model year 1992 that prohibit the manufacture, sale, or introduction into commerce of any engine that requires leaded gasoline.".

MOTOR VEHICLE TESTING AND CERTIFICATION

SEC. 212. (a) IDLE TEST.—Section 206(a) of the Clean Air Act is amended by adding the following new paragraph at the end thereof:

"(4) Not later than one year after the enactment of this paragraph, the Administrator shall promulgate regulations adding an idle test and idle test mode to the Federal Test Procedure for light duty vehicles. Such modified test procedure shall be used for the certification of light duty vehicles and engines manufactured during or after model year 1992.".

(b) PRODUCTION LINE TESTING.—Section 206(b) of the Clean Air Act is amended by adding the following at the end thereof:

"(3) The Administrator shall revise the regulations under this section regarding selective enforcement auditing of new light duty vehicles (as set forth in section 86.610 of subpart G of part 86 of title 40 of the Code of Federal Regulations) such that the maximum percentage of failing vehicles that, for purposes of sampling inspection, can be considered satisfactory as a process average for purposes of such selective enforcement audits shall be 10 per centum. Such revised regulations shall apply with respect to motor vehicles manufactured after the model year 1991.".

(c) REVISION OF CERTAIN TEST PROCEDURES.—Section 206 of the Clean Air Act is amended by adding the following new subsection:

"(h) Within eighteen months after the enactment of this subsection and at least every four years thereafter, the Administrator shall review and revise as necessary the regulations under subsection (a) and (b) of this section regarding the testing of motor vehicles and motor vehicle engines to insure that vehicles are tested under circumstances which reflect the actual current driving conditions under which motor vehicles are used, including conditions relating to fuel, temperature, acceleration and altitude. Such revised test procedures shall include testing of evaporative emissions (including running losses) as well as tail-pipe emissions and shall provide for the testing of trucks with a gross vehicle weight rating of six thousand pounds or more in a loaded mode approximating such rating.".

(d) AVERAGING PROHIBITED.—Section 202 of the Clean Air Act is amended by adding the following new subsection:

"(e) AVERAGING PROHIBITED.—Each emission standard under this section shall apply to, and be met by, each and every vehicle or engine sold, offered for sale, introduced into commerce, or imported, and may not be met or complied with by the average of the performance of various vehicles, engines, engine families, or models manufactured by the same manufacturer.".

IN-USE COMPLIANCE—RECALL

SEC. 213. (a) USE OF INFORMATION FROM STATE PROGRAMS.—Section 207(c) of the Clean Air Act is amended by adding the following new paragraph at the end thereof:

"(4) In making determinations of nonconformity under this subsection, the Administrator shall take into account information collected under any State vehicle emission control inspection and maintenance program. Any State in which such a program is operating may petition the Administrator to make a determination of nonconformity under paragraph (1) on the basis of information collected in such program. The Administrator shall act upon such petition within sixty days of receipt of such petition.".

(b) RECALL TESTING AT MANUFACTURER'S EXPENSE.—Section 207(c) of the Clean Air Act is further amended by adding the following new paragraph:

"(5) If the Administrator has reason to believe that in-use vehicles or engines may not conform to regulations prescribed under section 202, the Administrator may require the manufacturer of such vehicles or engines to pay the costs that the Administrator incurs in procuring and testing such vehicles or engines. Such reason to believe shall be based on data or information available to the Administrator, including but not limited to, field surveys, State inspection and maintenance programs and consumer complaints.".

FUEL VOLATILITY

SEC. 214. Section 211 of the Clean Air Act is amended by adding the following new subsection at the end thereof:

"(h) EVAPORATIVE EMISSIONS FROM MOTOR VEHICLE FUELS.—

"(1) The Administrator shall promulgate regulations to reduce evaporative emissions from motor vehicle fuels.

"(2) Regulations under this subsection shall include a standard for gasoline volatility. The standard shall apply to all gasoline sold, or offered for sale, or introduced into commerce for use in motor vehicles during the high ozone periods of each year. Effective with respect to gasoline sold in the second high ozone period which commences after the enactment of this subsection, the standard shall require that such gasoline sold, or offered for sale, or introduced into commerce for use in motor vehicles in class C areas (as defined by the American Society of Testing Materials as of the date of enactment of this subsection) shall not exceed a Reid vapor pressure of nine pounds per square inch unless the Administrator establishes a lower number which the Administrator determines to be achievable and appropriate for purposes of protecting public health and welfare. The regulations shall require a proportional reduction in areas other than such class C areas.

"(3) For purposes of regulations referred to in paragraph (2), the high ozone period shall be the period between May 16 and September 15 each year or such longer period as the Administrator establishes for any region to cover periods of potential ozone air pollution in excess of the standard for ozone for the region.

"(4) For fuel blends containing gasoline and 10 per centum denatured anhydrous ethanol, the Reid vapor pressure limitation pursuant to this subsection shall be one pound per square inch greater than the applicable Reid vapor pressure limitations established under paragraph (2): *Provided, however,* That a refiner, distributor, blender, marketer, reseller, carrier, retailer, or wholesale purchaser shall be deemed to be in full compliance with the provisions of this subsection and the regulations promulgated thereunder, if it can demonstrate (by showing receipt of a certification or other evidence acceptable to the Administrator) that (A) the gasoline portion of the blend complies with the Reid vapor pressure limitations promulgated pursuant to this subsection, and (B) the ethanol portion of the blend does not exceed its waiver condition under subsection (f)(4).".

### DESULFURIZATION

SEC. 215. Section 211 of the Clean Air Act is amended by adding the following new subsection to the end thereof:

"(i) DESULFURIZATION OF DIESEL FUEL.—

"(1) Effective October 1, 1993, no person shall manufacture, sell, offer for sale, dispense, transport or introduce into commerce motor vehicle diesel fuel which contains a concentration of sulfur in excess of 0.05 per centum (by weight) or which fails to meet a cetane index minimum of 40.

"(2) No later than twelve months after the enactment of this subsection, the Administrator shall promulgate regulations to implement and enforce the requirements of paragraph (1). The Administrator shall require manufacturers and importers of diesel fuel not intended for use in motor vehicles to dye such fuel in order to segregate it from motor vehicle diesel fuel.

"(3) The sulfur content of fuel required to be used in the certification of 1991 through 1993 model year heavy-duty diesel vehicles and engines shall not exceed 0.05 per centum (by weight). The sulfur content and cetane index minimum of fuel required to be used in certification of 1994 and later model year heavy-duty diesel vehicles and engines shall comply with the regulations promulgated under paragraph (2).".

### LEAD PHASEDOWN

SEC. 216. Section 211 of the Clean Air Act is amended by adding the following new subsection at the end thereof:

"(j) PROHIBITION ON LEADED GASOLINE FOR HIGHWAY USE.—Effective January 1, 1991, it shall be unlawful for any person to sell, offer for sale, or introduce into commerce, for use as fuel in any motor vehicle (as defined in section 216(2)) any gasoline which contains lead or lead additives. The Administrator may extend the January 1, 1991, deadline for up to two years, if the Administrator determines that unavailability of gasoline containing lead or lead additives for such vehicles will reduce the availability of such gasoline for farm vehicles and that alternatives to gasoline containing lead or lead additives are unavailable for use in gasoline powered farm vehicles.".

### FUEL QUALITY

SEC. 217. Section 211 of the Clean Air Act is amended by adding the following new subsection to the end thereof:

"(k) FUEL QUALITY.—

"(1) Not later than thirty-six months after the date of enactment of this subsection the Administrator shall, after notice and opportunity for public comment, promulgate regulations establishing specifications for fuel quality which will minimize, to the extent economically and technically achieveable, emissions (including evaporative emissions) of hydrocarbons, carbon monoxide, oxides of nitrogen, particulate matter and hazardous air pollutants over the useful life of vehicles and engines certified for manufacture under this title. Such regulations may prohibit the presence of fuel impurities and other substances or mandate the use of specific additives to achieve the purposes of this subsection. The regulations shall be effective for fuels sold on and after January 1, 1994. In the event that the Administrator does not promulgate the regulations required by this paragraph, effective January 1, 1994, it shall be unlawful to sell, offer for sale or introduce into commerce any fuel for use in a gasoline-powered vehicle unless such fuel contains additives effective in preventing the accumulation of deposits in fuel-injected engines.".

"(2) In order to achieve and maintain attainment of ambient air quality standards, the Administrator may promulgate regulations applicable to fuel refiners, distributors, marketers, or consumers establishing specifications for fuels (including regulations requiring the availability or sale of fuels meeting the specifications in a nonattainment area or areas) to reduce emissions of pollutants subject to a standard under this title or hazardous air pollutants from motor vehicles. In establishing such specifications and availability requirements the Administrator shall consider other environmental effects which would result from production and use of fuels meeting the specifications. The Administrator shall require as part of any specification under this paragraph that there be no increase in emissions of any other pollutant subject to a standard under this title or any hazardous air pollutant by vehicles using the specified fuel. Regulations under this paragraph shall be stated as performance standards and may be satisfied by any fuel which, as certified to the Administrator by the refiner or distributor, achieves comparable emissions reductions and otherwise satisfies the specification.

OXYGENATED FUELS

SEC. 218. Section 211 of the Clean Air Act is amended by adding the following new subsection to the end thereof:

"(l)(1) Except as provided in paragraph (2) and effective October 1, 1991, no person shall, during the period from October 1 to March 31 each year, sell, offer for sale, or introduce into commerce in any area classified as nonattainment for carbon monoxide any gasoline fuel for use in a motor vehicle unless the oxygen content of such fuel shall be 3.1 per centum or greater.

"(2) The Administrator shall, not later than nine months after the date enactment of this subsection, promulgate guidelines allowing the exchange of marketable oxygen credits between sellers of fuels with an oxygen content higher than that required by paragraph (1) and other sellers of fuels to offset the sale or use of fuels with a lower content than required, *Provided,* That such exchanges shall not be permitted between sellers located in different non-attainment areas and that the average oxygen content of fuels sold in any area that is nonattainment for carbon monoxide be 3.1 per centum or greater.

"(3) The Administrator may waive, in whole or in part, the requirements of this subsection in any area upon a demonstration by the State to the satisfaction of the Administrator that the use of oxygenated fuels would prevent or interfere with the attainment by such area of a national primary ambient air quality standard (or a State or local ambient air quality standard) for any air pollutant other than carbon monoxide.

"(4) Any person selling oxygenated fuel at retail pursuant to this subsection shall be required under regulations promulgated by the Administrator to label the fuel dispensing system with a notice that the fuel is oxygenated and will reduce carbon monoxide emissions from motor vehicles.".

MISFUELING

SEC. 219. Section 211 of the Clean Air Act is amended by deleting subsection (g) and inserting the following new subsection:

"(g)(1) No person shall introduce, or cause or allow the introduction of, leaded gasoline into any motor vehicle which is labeled 'unleaded gasoline only,' which is equipped with a gasoline tank filler inlet designed for the introduction of unleaded gasoline, which is a 1990 or later model year motor vehicle, or which such person knows or should know is a vehicle designed solely for the use of unleaded gasoline.

"(2) Beginning October 1, 1993, no person shall introduce or cause or allow the introduction into any motor vehicle of diesel fuel which such person knows or should know contains a concentration of sulfur in excess of 0.05 per centum (by weight) or which fails to meet a cetane index minimum of 40.".

ENFORCEMENT

SEC. 220. (a) TESTING. Section 203(a)(2) of the Clean Air Act is amended by inserting before the semicolon at the end thereof the following: ", or to refuse to pay for procurement or testing under section 207(c)".

(b) TAMPERING WITH VEHICLE EMISSION CONTROLS.—Section 203(a)(3) of the Clean Air Act is amended to read as follows:

"(3)(A) for any person to remove or render inoperative any device or element of design installed on or in a motor vehicle or motor vehicle engine in compliance with regulations under this title prior to its sale and delivery to the ultimate purchaser, or for any person knowingly to remove or render inoperative any such device or element of design after such sale and delivery to the ultimate purchaser except as may be temporarily necessary in the course of routine proper maintenance; or

"(B) for any person to manufacture or sell, or offer to sell, any part or component intended for use with, or as part of, any motor vehicle or motor vehicle engine, where a principal effect of such part or component is to bypass, defeat, or render inoperative any device or element of design installed on or in a motor vehicle or motor vehicle engine in compliance with regulations under this title, and where such person knows or should know that such part or component is being offered for sale for such use or put to such use; or".

(c) CIVIL AND ADMINISTRATIVE PENALTIES.—Section 205 of the Clean Air Act is amended to read as follows:

"SEC. 205. (a) CIVIL PENALTIES.—Any person who violates paragraph (1), (2), or (4) of section 203(a) or any manufacturer or dealer who violates paragraph (3)(A) of section 203(a) of this title shall be subject to a civil penalty of not more than $25,000. Any other person who violates paragraph (3)(A) or any person who violates paragraph (3)(B) of such section 203(a) shall be subject to a civil penalty of not more than $2,500. Any such violation with respect to paragraph (1), (3)(A), or (4) of section 203(a) of this title shall constitute a separate offense with respect to each motor vehicle or motor vehicle engine. Any such violation with respect to paragraph (3)(B) of such section shall constitute a separate offense with respect to each part or component. Any such violation with respect to paragraph (2) of such section shall constitute a separate offense with respect to each day of violation.

"(b) CIVIL ACTIONS.—The Administrator may commence a civil action to assess and recover any civil penalty prescribed in subsection (a) of this section, subsection (d) of section 211 (pertaining to fuels and fuel additives), subsection (b) of section 216 (pertaining to emissions of carbon dioxide), or subsection (e) of section 217 (pertaining to nonroad engines and vehicles). Any action under this subsection may be brought in the district court of the United States for the district in which the violation is alleged to have occurred or in which the defendant resides or has his principal place of business, and such court shall have jurisdiction to assess such civil penalty. In determining the amount of any civil penalty to be assessed under this subsection, the court shall consider the seriousness of the violation, the economic benefit (if any) resulting from the violation, the size of the violator's business, the violator's history of compliance with this title, any good faith efforts to comply with the applicable requirements, the economic impact of the penalty on the violator, and such other matters as justice may require.

"(c)(1) The Administrator may assess a civil penalty prescribed in subsection (a) of this section, subsection (d) of section 211 (pertaining to fuels or fuel additives), subsection (b) of section 216 (pertaining to emissions of carbon dioxide) or subsection (e) of section 217 (pertaining to nonroad engines and vehicles), except that the maximum amount of any civil penalty assessed under this paragraph shall not exceed $200,000. Assessment of a civil penalty under this subsection shall be by an order made on the record after opportunity for a hearing in accordance with section 554 of title 5, United States Code. The Administrator may issue rules for discovery procedures for hearings under this paragraph.

"(2) In determining the amount of any civil penalty assessed under this subsection, the Administrator shall consider the seriousness of the violation, the economic benefit (if any) resulting from the violation, the size of the violator's business, the violator's history of compliance with this title, any good-faith efforts to comply with the applicable requirements, the economic impact on the violator, and such other matters as justice may require.

"(3)(A) Action by the Administrator under this subsection shall not affect or limit the Administrator's authority to enforce any provision of this Act, except that any violation—(i) with respect to which the Administrator has commenced and is diligently prosecuting an action under this subsection, or (ii) for which the Administrator has issued a final order not subject to further judicial review and the violator has paid a penalty assessment under this subsection, shall not be the subject of civil penalty action under subsection (b).

"(B) No action by the Administrator under this subsection shall affect any person's obligation to comply with any section of this Act.

"(4) An order issued under this subsection shall become final thirty days after its issuance unless a petition for judicial review is filed under paragraph (5).

"(5) Any person against whom a civil penalty is assessed in accordance with this subsection may obtain review of such assessment in the United States Court of Appeals for the District of Columbia Circuit, or for any other circuit in which such person resides or transacts business, by filing a notice of appeal in such court within the thirty-day period beginning on the date the civil penalty order is issued and by simultaneously sending a copy of such notice to the Administrator and the Attorney General. The Administrator shall promptly file in such court a certified copy of the record on which the order was issued. Such court shall not set aside or remand such order unless there is not substantial evidence in the record, taken as a whole, to support the finding of a violation or unless the Administrator's assessment of the penalty constitutes an abuse of discretion, and such court shall not impose additional civil penalties for the same violation unless the Administrator's assessment of the penalty constitutes an abuse of discretion.

"(6) If any person fails to pay an assessment of a civil penalty imposed by the Administrator as provided in this subsection—

"(A) after the order making the assessment has become final, or

"(B) after a court in an action brought under paragraph (5) has entered a final judgment in favor of the Administrator, the Administrator shall request the Attorney General to bring a civil action in an appropriate district court to recover the amount assessed (plus interest at rates established pursuant to 26 U.S.C. 6621(a)(2) from the date of the final order or the date of the final judgment, as the case may be). In such an action, the validity, amount, and appropriateness of such penalty shall not be subject to review. Any person who fails to pay on a timely basis the amount of an assessment of a civil penalty as described in the first sentence of this paragraph shall be required to pay, in addition to such amount and interest, attorneys fees and costs for collection proceedings, and a quarterly nonpayment penalty for each quarter during which such failure to pay persists. Such nonpayment penalty shall be in an amount equal to 20 per centum of the aggregate amount of such person's penalties and nonpayment penalties which are unpaid as of the beginning of such quarter.

"(7) The Administrator may issue subpoenas for the attendance and testimony of witnesses and for the production of relevant papers, books, or documents in connection with hearings under this subsection. In case of contumacy or refusal to obey a subpoena issued under this paragraph and served upon any person, the district court of the United States for any district in which such person is found, resides, or transacts business, upon application by the United States and after notice to such person, shall have jurisdiction to issue an order requiring such person to appear and give testimony before the Administrator, or to appear and produce documents before the Administrator, or both. Any failure to obey such order of the court may be punished by such court as a contempt thereof.".

(c) ENFORCEMENT OF SECTION 211.—Section 211(d) of the Clean Air Act is amended to read as follows:

"(d)(1) Any person who violates subsection (a), (f), (g), (j), or (l) or the regulations prescribed under subsection (c), (h), (i), or (k) or who fails to furnish any information or conduct any tests required by the Administrator under subsection (b) shall be liable to the United States for a civil penalty of not more than $25,000 per day of violation. Any violation with respect to a regulation prescribed under subsection (c) of this section which establishes a regulatory standard based upon a multiday averaging period shall constitute a separate day of violation for each and every day in the averaging period. Such civil penalties shall be assessed in accordance with the provisions of subsections (b) and (c) of section 205.

"(2) INJUNCTIVE AUTHORITY.—The district courts of the United States shall have jurisdiction to restrain violations of subsections (a), (f), (g), or (j) and of the regulations prescribed under subsection (c), (h), (i), or (k), to award other appropriate relief, and to compel the furnishing of information and the conduct of tests required by the Administrator under subsection (b). Actions to restrain such violations and compel such actions shall be brought by and in the name of the United States.".

## TITLE III—PROVISIONS RELATING TO ENFORCEMENT

### SECTION 113 ENFORCEMENT

SEC. 301. (a) Section 113(a)(1) of the Clean Air Act is amended as follows:

(1) In the first sentence, after "finds that any person", insert the words "has violated or"; and following the words "shall notify the person" replace "in violation of" with "who violated".

(2) In the second sentence,

(A) strike the words "If such violation extends beyond the thirtieth day after the date of the Administrator's notification," and insert in lieu thereof the words "At any time after the expiration of thirty days following the date on which such notice of the violation is issued,";

(B) insert after "of such plan" the following: ", may issue an administrative penalty order in accordance with subsection (d),"; and

(C) insert, at the end of the sentence, the following: ", without regard to the period of the violation. Nothing in this subsection shall preclude the United States from commencing a criminal action under section 113(c) without such notification for any such violation.".

(b) Section 113(a)(2) of the Clean Air Act is amended as follows:

(1) Strike the "or" at the end of section 113(a)(2)(A), redesignate subparagraph "(B)" as "(C)", and insert the following new subparagraph (B):

"(B) by issuing an administrative penalty order under subsection (d) of this section, or".

(2) Insert the following new sentence at the end of section 113(a)(2): "Nothing in this subsection shall preclude the United States from commencing a criminal action under section 113(c) without such notification for any such violation.".

(c) Section 113(a)(3) of the Clean Air Act is amended as follows:

(1) Insert the words "has violated or" before the words "is in violation of" in the first sentence.

(2) Strike the words "section 111(e) of this title" and all that follows down through "(relating to inspections, etc.), he" and insert in lieu thereof the following new language: "any other requirement of this title including, but not limited to, a requirement of any rule,

order, waiver or permit promulgated or approved under this title or for the payment of any fee owed the United States under this Act, the Administrator:".

(3) Strike the words "or he" before the words "may bring a civil action" and insert in lieu thereof the following words: "may issue an administrative penalty order in accordance with subsection (d); or".

(4) Insert after the words "may bring a civil" the words "or criminal".

(d) Section 113(a)(4) of the Clean Air Act is amended by inserting at the end thereof: "An order issued under this subsection shall require the person to whom it was issued to comply with the requirement as expeditiously as practicable, but in no event longer than one year after the date the order was issued, and shall be nonrenewable. No order issued under this subsection shall prevent the State or the Administrator from assessing any penalties nor otherwise affect or limit the State or the United States' authority to enforce under other provisions of this Act, nor affect any person's obligations to comply with any section of this Act, or a term or condition of any permit or applicable implementation plan promulgated or approved under this Act.".

(e) Section 113(a)(5) of the Clean Air Act is amended to read as follows:

"(5) Whenever, on the basis of any available information, the Administrator finds that a State is not acting in compliance with any requirement of the Act relating to the construction of new sources or the modification of existing sources, the Administrator may—

"(A) issue an order prohibiting the construction, modification or operation of any major stationary source in any area to which such provisions apply;

"(B) issue an administrative penalty order in accordance with subsection (d); or

"(C) bring a civil action under subsection (b)(5).

Nothing in this subsection shall preclude the Administrator from filing a criminal action under section 113(c) at any time for any such violation.

(f) Section 113(b) of the Clean Air Act is amended to read as follows:

"(b) The Administrator shall, in the case of any person which is the owner or operator of a major emitting facility or a major stationary source, and may, in the case of any other person, commence a civil action for a permanent or temporary injunction, or to assess and recover a civil penalty of not more than $25,000 per day for each violation, or both, whenever such person—

"(1) violates any requirement of an applicable implementation plan (such action shall be commenced (A) during any period of federally assumed enforcement, or (B) more than thirty days following the date of the Administrator's notification under subsection (a)(1) of a finding that such person is violating such requirement); or

"(2) violates any other requirement of this title or title III, including a requirement of any rule, order, waiver or permit promulgated or approved under this Act or for the payment of any fee under this Act; or

"(3) attempts to construct, modify or operate a major stationary source in any area with respect to which a finding under subsection (a)(5) of this section has been made.

Any action under this subsection may be brought in the district court of the United States for the district in which the violation is alleged to have occurred, or in which the defendant resides, or where the defendant's principal place of business is located, and such court shall have jurisdiction to restrain such violation, to require compliance, to assess such civil penalty, and to collect any fees owed under the Act and any noncompliance assessment and nonpayment penalty owed under section 120 and to award any other appropriate relief. Notice of the commencement of such action shall be given to the appropriate State air pollution control agency. In the case of any action brought by the Administrator under this subsection, the court may award costs of litigation (including reasonable attorney and expert witness fees) to any party or parties against whom such action was brought in any case where the court finds that such action was unreasonable.

(g) Section 113(c) of the Clean Air Act is amended to read as follows:

"(c) CRIMINAL ENFORCEMENT.—

"(1) Any person who knowingly fails to pay any fee owed the United States under this title or title III shall, upon conviction, be punished by a fine pursuant to title 18 of the United States Code, or by imprisonment for not more than one year, or by both, per day for each violation. If a conviction of any person under this paragraph is for a violation committed after a first conviction of such person under this paragraph, the maximum punishment shall be doubled with respect to both the fine and imprisonment.

"(2) Any person who negligently releases into the air any hazardous air pollutant listed pursuant to section 112 of this Act or any extremely hazardous substance listed pursuant to section 11002(a)(2) of title 42, and who at the time negligently places another person in imminent danger of death or serious bodily injury shall, upon conviction, be punished by a fine under title 18 of the United States Code, or by imprisonment for not more than one year, or by both, per day for each violation. If a conviction of any person under this paragraph is for a violation committed after a first conviction of such person under this paragraph, the maximum punishment shall be doubled with respect to both the fine and imprisonment.

"(3) Any person who knowingly violates any requirement or prohibition of this title or title III, including but not limited to a requirement or prohibition of any rule, plan, order, waiver or permit promulgated or approved under those titles shall, upon conviction, be punished by a fine pursuant to title 18 of the United States Code, or by imprisonment for not more than five years, or by both, per day for each violation. If a conviction of any person under this paragraph is for a violation committed after a first conviction of such person under this paragraph, the maximum punishment shall be doubled with respect to both the fine and imprisonment.

"(4) Any person who knowingly—

"(A) makes any false statement, representation, or certification in, or omits material information from or knowingly alters, conceals or fails to maintain or file any notice, application, record, report, plan, or other document filed or required to be maintained or used for purposes of compliance under this Act (whether with respect to the requirements imposed by the Administrator or by a State); or

"(B) fails to notify or report as required under this Act; or

"(C) falsifies, tampers with, renders inaccurate, or fails to install any monitoring device or method required to be maintained or followed under this Act; shall, upon conviction, be punished by a fine pursuant to title 18 of the United States Code, or by imprisonment for not more than two years, or by both, per day for each violation. If a conviction of any person under this paragraph is for a violation committed after a first conviction of such person under this paragraph, the maximum punishment shall be doubled with respect to both the fine and imprisonment.

"(5)(A) Any person who knowingly releases into the air any hazardous air pollutant listed pursuant to section 112 of this Act or any extremely hazardous substance listed pursuant to section 11002(a)(2) of title 42, United States Code, and who knows at the time that he thereby places another person in imminent danger of death or serious bodily injury shall, upon conviction, be punished by a fine under title 18 of the United States Code, or by imprisonment of not more than fifteen years, or by both, per day for each violation. Any person committing such violation which is an organization shall, upon conviction under this paragraph, be subject to a fine of not more than $1,000 per day for each violation. If a conviction of any person under this paragraph is for a violation committed after a first conviction of such person under this paragraph, the maximum punishment shall be doubled with respect to both the fine and imprisonment. For any hazardous air pollutant listed pursuant to section 112 for which the Administrator has set an emissions standard, a release of such pollutant shall not constitute a violation of this paragraph unless it exceeds such standard.

"(B) In determining whether a defendant who is an individual knew that the violation placed another person in imminent danger of death or serious bodily injury—

"(i) the defendant is responsibile only for actual awareness or actual belief possessed; and

"(ii) knowledge possessed by a person other than the defendant, but not by the defendant, may not be attributed to the defendant;

except that in proving a defendant's possession of actual knowledge, circumstantial evidence may be used, including evidence that the defendant took affirmative steps to be shielded from relevant information.

"(C) The term 'organization' means a legal entity, other than a government, established or organized for any purpose, and such term includes a corporation, company, association, firm, partnership, joint stock company, foundation, institution, trust, society, union, or any other association of persons.

"(D) The term 'serious bodily injury' means bodily injury which involves a substantial risk of death, unconsciousness, extreme physical pain, protracted and obvious disfigurement or protracted loss or impairment of the function of a bodily member, organ, or mental faculty.

"(6) For the purposes of this subsection, the term 'person' includes, in addition to the entities referred to in section 302(e), any responsible corporate officer.".

(h) Current section 113(d) of the Clean Air Act is deleted in its entirety and replaced with the following new section 113(d);

"(d) ADMINISTRATIVE ASSESSMENT OF CIVIL PENALTIES.—

"(1) The Administrator may issue an administrative order against any person assessing a civil administrative penalty of up to $25,000, per day for each violation, whenever, on the basis of any available information, the Administrator finds that such person—

"(A) violates any requirement of an applicable implementation plan (Such order shall be issued (i) during any period of federally assumed enforcement, or (ii) more than thirty days following the date of the Administrator's notification under subsection (a)(1) of this section of a finding that such person is violating such requirement); or

"(B) violates any other requirement of this title or title III, including, but not limited to, a requirement of any rule, order, waiver or permit promulgated or approved under this Act or for the payment of any fee owed the United States under this Act; or

"(C) attempts to construct, modify or operate a major stationary source in any area with respect to which a finding under subsection (a)(5) of this section has been made.

The Administrator's authority under this paragraph shall be limited to matters where the total penalty sought does not exceed $200,000 and the first alleged date of violation occurred no more than twelve months prior to the initiation of the administrative action.

"(2)(A) An administrative penalty assessed under paragraph (1) shall be assessed by the Administrator by an order made on the record after opportunity for a hearing in accordance with sections 554 and 556 of title 5 of the United States Code. The Administrator may issue rules for discovery and other procedures for hearings under this paragraph. Before issuing such an order, the Administrator shall give written notice to the person to be assessed an administrative penalty of the Administrator's proposal to issue such order and provide such person an opportunity to request such a hearing on the order, within fifteen days of the date the notice is received by such person.

"(B) The Administrator may compromise, modify, or remit, with or without conditions, any administrative penalty which may be imposed under paragraph (d)(1).

"(3) The Administrator may implement through regulation, after consultation with the Attorney General, a field citation program for appropriate minor violations, which authorizes the issuance of field citations assessing civil penalties not to exceed $5,000 per day for each violation. Any person to whom a field citation is assessed may, within a reasonable time as prescribed by the Administrator through regulation, elect to pay the penalty assessment or to request a hearing on the field citation. If a request for a hearing is not made within the time specified in the regulation, the penalty assessment in the field citation shall be final. Such hearing shall not be subject to section 554 or 556 of title 5 of the United States Code, but shall provide a reasonable opportunity to be heard and to present evidence. Payment of a civil penalty required by a field citation shall not be a defense to further enforcement by the United States or a State to correct a violation, or to assess the statutory maximum penalty pursuant to other authorities in the Act, if the violation continues.

"(4) Any person against whom a civil penalty is assessed under this subsection may seek review of such assessment in the United States District Court for the District of Columbia, or for the district in which the violation is alleged to have occurred, in which such person resides, or where such person's principal place of business is located, by filing a notice in such court within thirty days following the date the civil penalty order is issued under paragraph (2), or the final decision in a hearing under paragraph (3) is rendered, and by simultaneously sending a copy of the filing by certified mail to the Administrator and the Attorney General. The Administrator shall promptly file in such court a certified copy, or certified index, as appropriate, of the record on which the order or final decision was issued within thirty days. Such court shall not set aside or remand such order or final decision unless there is not substantial evidence in the record, taken as a whole, to support the finding of a violation or unless the Administrator's assessment of the penalty constitutes an abuse of discretion. In any such proceedings, the United States may seek to recover civil penalties assessed under this section.

"(5) If any person fails to pay an assessment of a civil penalty—

"(A) after the order making the assessment or field citation has become final, or

"(B) after a court in an action brought under paragraph (4) has entered a final judgment in favor of the Administrator, the Administrator shall request the Attorney General to bring a civil action in an appropriate district court to recover the amount assessed (plus interest at rates established pursuant to section 6621(a)(2) of title 26, United States Code, from the date of the final order or decision or the date of the final judgment, as the case may be). In such an action, the validity, amount, and appropriateness of such penalty shall not be subject to review. Any person who fails to pay on a timely basis a civil penalty under this section shall be required to pay, in addition to such penalty and interest, the United States' enforcement expenses, including but not limited to attorneys fees and costs incurred by the United States for collection proceedings, and a quarterly nonpayment for each quarter during which such failure to pay persists. Such nonpayment penalty shall be in an amount equal to 20 per centum of the aggregate amount of such person's outstanding penalties and nonpayment penalties accrued as of the beginning of such quarter.

(i) Current section 113(e) of the Clean Air Act is deleted in its entirety and replaced with the following new section 113(e):

"(e) PENALTY ASSESSMENT CRITERIA. -

"(1) In determining the amount of any penalty to be assessed under this section or section 304(a), the court shall take into consideration (in addition to such other factors as justice may require) the size of the business, the economic impact of the penalty on the business, the violator's compliance history and good faith efforts to comply, the duration of the violation as established by any credible evidence (including evidence other than the applicable test method), payment by the violator of penalties previously assessed for the same violation, the economic benefit of noncompliance, and the seriousness of the violation.

"(2) A penalty may be assessed for each day of each violation. For purposes of determining the number of days of violation for which a penalty may be assessed under this section or section 304(a), or an assessment may be made under section 120, the violation shall be deemed to commence on the first provable date of violation and to continue each and every day thereafter until the violator establishes that continuous compliance has been achieved, except to the extent that the violator can prove by a preponderance of the evidence that there were intervening days during which no violation occurred or that the violation was not continuing in nature.".

### REVIEWABILITY OF ADMINISTRATIVE ORDERS

SEC. 302. (a) Section 307(b)(2) of the Clean Air Act is amended by adding at the end thereof: "Orders or notices issued under section 113(a), section 167 and section 303, administrative subpoenas under section 307(a), and actions under sections 114, 206(c) and 208 of this Act are not considered final actions for purposes of this section. Such orders, notices, subpoenas and actions shall not be subject to judicial review except in a proceeding commenced by the United States under sections 113, 120, 204 or 205, or in a citizen suit commenced under section 304, to enforce the order, notice, subpoena or action. No such order, notice, subpoena or action may be challenged in any citizen suit under section 304 unless the Administrator and the Attorney General are notified in writing of such challenge.".

(b) Section 307(e) of the Clean Air Act is amended by inserting at the end thereof the following: "Orders or notices issued under section 113(a), section 167 or section 303, subpoenas issued under section 307(a), and actions under sections 114, 206(c) and 208 of this Act may only be reviewed in a proceeding commenced by the United States under sections 113, 120, 204, or 205, or in a citizen suit under section 304, to enforce the order, notice, subpoena or action.".

### COMPLIANCE CERTIFICATION

SEC. 303. (a) Section 114(a)(1) of the Clean Air Act is amended by—

(1) inserting ", on a one-time, periodic or continuous basis" immediately before "to (A) establish and maintain";

(2) inserting "audit procedures" immediately before "or methods, (D)";

(3) inserting "procedures or" immediately before "methods, at such locations,";

(4) inserting "during such continuous periods" immediately before ", and in such manner as the Administrator";

(5) striking "and" immediately before subparagraph (E); and

(6) redesignating subparagraph (E) as (G) and inserting the following new subparagraphs: "(E) keep periodic or continuous records on control equipment parameters, production variables or other indirect data when direct monitoring of emissions is impractical, (F) submit compliance certifications in accordance with section 114(a)(3); and".

(b) Section 114(a) is amended by adding the following new paragraph:

"(3) The Administrator shall in the case of any person which is the owner or operator of a major stationary source, and may, in the case of any other person, require enhanced monitoring and submission of compliance certifications. Compliance certifications shall include (i) identification of the applicable requirement that is the basis of the certification, (ii) the method used for determining the compliance status of the source, (iii) the compliance status, (iv) whether compliance is continuous or intermittent, (v) such other facts as the Administrator may require. Compliance certifications and monitoring data shall be public information. Submission of a compliance certification shall in no way limit the Administrator's authorities to investigate or otherwise implement the Act.".

(c) Section 307(b)(1) is amended by inserting "or revising regulations for enhanced monitoring and compliance certification programs under section 114(a)(3) of this Act," immediately before "or any other final action of the Administrator".

### CONTRACTOR INSPECTIONS

SEC. 304. (a) Section 114(a)(2) of the Clean Air Act is amended by inserting "(including an authorized contractor acting as a representative of the Administrator)," immediately before "upon presentation of his credentials".

(b) Section 114(c) is amended by striking "except that such record," and all that follows in the subsection and inserting ". Any authorized representative of the Administrator (including an authorized contractor acting as a representative of the Administrator) shall be considered an employee of the

United States for purposes of the provisions of section 1905 of title 18. Nothing in this subsection shall prohibit the Administrator or an authorized representative of the Administrator (including any authorized contractor acting as a representative of the Administrator) from disclosing records, reports or information to other officers, employees or authorized representatives of the United States (including any authorized contractor acting as a representative of the Administrator), or to any State concerned with carrying out this Act, or when relevant in any proceeding under this Act.".

### ADMINISTRATIVE ENFORCEMENT SUBPOENAS

SEC. 305. Section 307 of the Clean Air Act is amended by redesignating subsection (a)(1) as subsection (a), and, in that newly designated subsection, striking "or" before "section 202(b)(5)" and inserting ", any investigation, monitoring, reporting requirement, entry, compliance inspection, or administrative enforcement proceeding under the Act (including but not limited to section 113, section 114, section 120, section 205, section 206, section 208, section 303 or section 306), or to otherwise carry out the provisions of the Act," immediately after "section 202(b)(4) or 211 (c)(3)".

### EMERGENCY ORDERS

SEC. 306. Section 303 of the Clean Air Act, is amended by—

(a) striking "the health of persons, and that appropriate State or local authorities have not acted to abate such sources" and inserting "public health or welfare, or the environment";

(b) revising the second sentence to read, "If it is not practicable to assure prompt protection of public health or welfare or the environment by commencement of such a civil action, the Administrator may issue such orders as may be necessary to protect public health or welfare or the environment.";

(c) striking the last two sentences in their entirety; and

(d) deleting subsection (b) in its entirety and redesignating subsection 303(a), as amended, as section 303.

### CONTRACTOR LISTINGS

SEC. 307. Section 306(a) of the Clean Air Act is amended by—

(a) striking "(1)" after "section 113(c)"; and

(b) inserting at the end thereof: "For convictions arising under section 113(c)(2), the condition giving rise to the conviction also shall be considered to include any substantive violation of this Act associated with the violation of 113(c)(2). The Administrator may extend this prohibition to other facilities owned or operated by the convicted person.".

### JUDICIAL REVIEW PENDING RECONSIDERATION OF REGULATION

SEC. 308. Section 307(b)(1) of the Clean Air Act is amended by adding at the end thereof the following: "A petition for reconsideration by the Administrator of any otherwise final agency action shall not render the action nonfinal for purposes of judicial review nor extend the time within which a petition for review may be filed, and shall not postpone the effectiveness of the agency action.".

### CITIZEN SUITS AND PETITIONS

SEC. 309. (a) CIVIL PENALTIES.—

(1) Section 304(a) of the Clean Air Act is amended by inserting immediately before the period at the end thereof: ", and to apply any appropriate civil penalties (except for actions under paragraph (a)(2)), including those pursuant to a consent judgment, payable to the special fund as established in subsection (g), taking into account the factors listed in section 113(e)".

(2) Section 304 of the Clean Air Act is amended by adding the following new subsection:

"(g) PENALTY FUND.—Penalties received under subsection (a) shall be deposited in a special fund in the United States Treasury for licensing and other services, which shall be available for appropriation, and remain available until expended for use by the Environmental Protection Agency to finance air compliance and enforcement activities.".

(3) Paragraph (2) of subsection 304(c) of the Clean Air Act is amended to read as follows:

"(2) In any action under this section, the Administrator, if not a party, may intervene as a matter of right at any time in the proceeding. In such intervention, the Administrator may substitute himself as the plaintiff with regard to any claim for civil penalties. Upon such substitution, the citizen plaintiff's claims for civil penalties shall abate. A judgment in an action under this section to which the United States is not a party shall not, however, have any binding effect upon the United States.".

(b) UNREASONABLE DELAY.—Section 304(a) of the Clean Air Act, as amended by subsection (a), is further amended as follows:

(1) Paragraph (2) is amended to read as follows:

"(2) against the Administrator where there is alleged a failure to act that violates one or more of the standards set forth in section 307(d)(9), or constitutes unreasonable delay, provided however that a failure to act does not include a written decision not to take action which the Administrator designates, within such decision, as a final action within the meaning of section 307(b)(1); or";

(2) by inserting after "to perform such act or duty," the following: "or to compel agency action unreasonably delayed,"; and

(3) by adding at the end thereof the following: "Where a provision of the Act mandates that the Administrator shall take specified action when certain preconditions are met, the court's power to compel the specified action under paragraph (2) shall not depend in any manner upon whether the Administrator has published in the Federal Register a proposed or final determination that the threshold preconditions are met.".

(c) NOTICE TO THE GOVERNMENT.—Section 304(c) is amended by adding the following new paragraph:

"(3) Whenever any action is brought under this section the plaintiff shall serve a copy of the complaint on the Attorney General of the United States and on the Administrator. No consent judgment shall be entered in an action brought under this section in which the United States is not a party prior to forty-five days following the receipt of a copy of the proposed consent judgment by the Attorney General and the Administrator during which time the government may submit its comments on the proposed consent judgment to the court and parties or may intervene as a matter of right.".

(d) DEFERRED ACTIONS.—Section 307(b) of the Clean Air Act is amended by adding the following at the end thereof:

"(3) Where a final decision by the Administrator undertakes to perform an action, but defers such performance to a later time, any interested person may either challenge the deferral pursuant to paragraph (1) or bring an action at any time under section 304(a)(2) to compel such performance.".

(e) PETITIONS.—Section 307 of the Clean Air Act is amended by adding the following new subsection at the end thereof:

"(h) PETITIONS.—Any person may petition the Administrator to issue, amend, reconsider, or repeal any regulation or order issued under the authority of this Act. Within twelve months the Administrator shall either grant the petition or issue a final decision denying the petition, except that in the case of a petition for reconsideration under section 307(d)(7)(B), the Administrator shall grant or deny the petition within four months. In any case in which the Administrator grants a petition, the Administrator shall take final action in response to any such petition within a reasonable time.".

## ENHANCED IMPLEMENTATION AND ENFORCEMENT OF NEW SOURCE REVIEW REQUIREMENTS

SEC. 310. Section 167 of the Clean Air Act is amended by striking "the construction of a major emitting facility" and inserting "the operation, construction, or modification of a major emitting facility".

## MOVABLE STATIONARY SOURCES

SEC. 311. Section 302 of the Clean Air Act is amended by adding the following subsection:

"(t) STATIONARY SOURCE.—The term 'stationary source' means generally any source of an air pollutant except those emissions resulting directly from an internal combustion engine for transportation purposes."

○

NRDC

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Defense Council

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December 19, 1989

Paul Chimes, Documents Clerk
Committee on Environment and Public Wor
United States Senate
410 Dirksen Senate Office Building
Washington, DC 20510

Dear Mr. Chimes:

In reference to my testimony on urban smog before the Committee earlier this year, enclosed are materials for the hearing record from an NRDC study of smog exposures. Based on air quality monitoring data, these materials indicate that EPA's method of reporting on urban smog levels understates the severity of Americans' exposure to health-endangering pollution.

I would ask that these materials be included in the hearing report at the appropriate point.

Sincerely yours,

Richard Ayres

Richard E. Ayres
Senior Attorney

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# News Release

HOLD FOR RELEASE
11:00 A.M. Monday, May 22, 1989

CONTACT: Dave Hawkins
Jeanne Whalen
783-7800

## EPA REPORTS UNDERSTATE EXTENT OF SMOG PROBLEM, NRDC CONCLUDES

The Environmental Protection Agency's reports on ozone smog seriously understate the extent of the nation's urban smog problem and should be changed to avoid misleading the American people, an analysis prepared by the Natural Resources Defense Council concludes.

The NRDC analysis indicates that in many large American cities, unhealthful levels of smog occur about twice as often as EPA's reports suggest. In the industrialized Northeast (Chicago-Boston-Washington, DC), for example, smog reached unhealthy levels on 25 to 40 percent of the days in the in the 100-day summer smog season in 1988.

The analysis was conducted by David G. Hawkins, senior attorney at the Natural Resources Defense Council and a former Assistant Administrator of EPA. It was released at a news conference today (Monday, May 22, 1989) in Washington.

For more than a decade, EPA has reported an estimate of "expected exceedences" of the health-related ambient air quality

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standard in areas with chronic smog problems. EPA has used smog readings from only a single monitor to calculate the expected number of smoggy days. "This approach seriously underestimates the extent of the smog problem in most large urban areas," he said.

"We urge EPA Administrator Bill Reilly to change the reporting procedure for 1988 and later years. Congress is preparing to revise the federal Clean Air Act. A reporting change is necessary to present an accurate picture of the nation's serious ozone smog problem," Hawkins said.

"Smog is regional in nature," Hawkins explained. "Within a given urban area, ozone smog may violate the health standard at different monitors on different days. Using EPA data, we counted the number of smoggy days in 1987 and 1988 on a city-wide basis for the 48 large urban smog areas outside California." California was excluded because its 1988 smog records are not yet available to EPA.

"We found that 21 urban areas, including virtually the entire Northeast and much of the Southeast and Texas, had much worse smog than implied by EPA's reporting," Hawkins said.

The analysis showed, that the Houston metropolitan area, for example, actually had 54 smoggy days, compared with 21 "expected exceedences" reported by EPA. The Washington, D.C. area, with 10.5 "expected exceedences, had 18. Cincinnati, with two "expected exceedences," had nine. (See attached list of areas which had significantly more smog days than reported by EPA.)

The 1988 smog data reveal the pervasive nature of last summer's smog problems. There were 29 urban areas, home to 71 million people, that suffered 12 or more smoggy days last summer, approximately once a week. The Washington-to-New-York corridor saw smog more than twice a week.

Even the "peak" ozone reports may understate the public health threat of ozone smog, Hawkins said. "We examined hour-by-hour ozone readings in New York, Houston and Washington, D.C.," Hawkins said. "We found that ozone levels violated the Occupational Safety and Health Administration standard for ozone exposure at least as often as the EPA 'peak' was violated. OSHA limits work place exposure to ozone to no more than .10 parts per million in an eight-hour period.

"Overall, these analyses suggest that nationwide exposure to health-threatening levels of ozone smog is much more frequent, and a greater health concern, than previously believed based on EPA reports," Hawkins said.

"The pervasiveness of the urban smog problem, coupled with the health consequences of the smog levels we are experiencing, define a public health emergency," Hawkins said. "Yet, inconceivable as it seems, the big polluters are still arguing, based on statistical manipulation of the data, that the air is 'clean' most of the time.

"The average urban and suburban American knows better," Hawkins said. "And so will Congress, with a more accurate presentation of the facts by EPA."

# # #

## VIOLATIONS IN 1988 SUMMER SMOG SEASON*
## (48 Non-California Metropolitan Areas)

| AREA NAME | VIOLATION DAYS 1988 | VIOLATION DAYS SUMMER 1988 (%) | VIOLATION DAYS 1987 |
|---|---|---|---|
| HOUSTON-GALVESTON-BRAZORIA | 54 | 24% | 54 |
| NEW YORK-NO. NEW JERS.-LONG ISLND | 42 | 40% | 32 |
| PHILADELPHIA-WILMINGTON-TRENTON | 42 | 40% | 31 |
| BALTIMORE, MD | 36 | 36% | 23 |
| WASHINGTON, DC-MD-VA | 31 | 31% | 18 |
| HARTFORD-NEW BRITAIN-MIDDLETOWN | 28 | 28% | 23 |
| CHICAGO-GARY-LAKE COUNTY | 27 | 27% | 15 |
| CINCINNATI-HAMILTON | 27 | 27% | 9 |
| BOSTON-LAWRENCE-SALEM | 26 | 26% | 9 |
| MILWAUKEE-RACINE | 22 | 21% | 14 |
| ATLANTA, GA | 20 | 19% | 24 |
| PITTSBURGH-BEAVER VALLEY | 20 | 18% | 6 |
| ST LOUIS, MO-IL | 17 | 15% | 13 |
| SPRINGFIELD, MA | 17 | 17% | 1 |
| SHEBOYGAN, WI | 16 | 16% | 13 |
| LOUISVILLE, KY-IN | 16 | 16% | 4 |
| DETROIT-ANN ARBOR | 16 | 16% | 3 |
| PORTLAND, ME | 15 | 15% | 4 |
| HUNTINGTON-ASHLAND, WV-KY-OH | 14 | 14% | 8 |
| CHARLOTTE-GASTONIA-ROCK HILL, NC-SC | 14 | 13% | 8 |
| BATON ROUGE, LA | 13 | 6% | 11 |
| CLEVELAND-AKRON-LORAIN | 13 | 13% | 7 |
| NASHVILLE, TN | 13 | 13% | 3 |
| MUSKEGON, MI | 12 | 12% | 8 |
| RICHMOND-PETERSBURG, VA | 12 | 12% | 5 |
| RALEIGH-DURHAM, NC | 12 | 12% | 4 |
| ALLENTOWN-BETHLEHEM, PA-NJ | 12 | 12% | 3 |
| PARKERSBURG-MARIETTA, WV-OH | 12 | 12% | 3 |
| BIRMINGHAM, AL | 12 | 11% | 0 |
| DALLAS-FORT WORTH | 9 | 7% | 11 |
| GRAND RAPIDS, MI | 8 | 8% | 1 |
| PROVIDENCE-PAWTUCKET-FALL RIVER | 7 | 7% | 8 |
| BEAUMONT-PORT ARTHUR, TX | 7 | 3% | 3 |
| EL PASO, TX | 6 | 2% | 12 |
| ATLANTIC CITY, NJ | 6 | 6% | 5 |
| MEMPHIS, TN-AR-MS | 6 | 6% | 3 |
| INDIANAPOLIS, IN | 5 | 5% | 4 |
| MIAMI-FORT LAUDERDALE | 5 | 1% | 4 |
| LEXINGTON-FAYETTE, KY | 5 | 5% | 2 |
| SALT LAKE CITY-OGDEN, UT | 5 | 5% | 1 |
| NORFOLK-VA. BEACH-NEWPORT NEWS, VA | 4 | 4% | 2 |
| PORTLAND-VANCOUVER | 2 | 2% | 2 |
| WORCESTER, MA | 2 | 2% | 0 |
| TULSA, OK | 2 | 1% | 0 |
| MONTGOMERY, AL | 1 | 1% | 4 |
| PHOENIX, AZ | 1 | 0% | 2 |
| JACKSONVILLE, FL | 1 | 1% | 1 |
| TAMPA-ST. PETERSBURG-CLEARWATER, FL | 0 | 0% | 6 |

* 100-day smog season (May 24- August 31).

## AREAS WHERE ACTUAL 1987 VIOLATION DAYS WERE GREATER THAN 1.5 TIMES EPA REPORTED LEVELS

| | 1987 | |
|---|---|---|
| AREA NAME | ACTUAL VIOLATION DAYS | ESTIMATED EXCEEDANCES PER EPA |
| HOUSTON-GALVESTON-BRAZORIA | 54 | 20.8 |
| NEW YORK-NO. NEW JERS.-LONG ISLND | 32 | 19.2 |
| ATLANTA, GA | 24 | 15 |
| HARTFORD-NEW BRITAIN-MIDDLETOWN | 23 | 11.6 |
| BALTIMORE, MD | 23 | 11.1 |
| WASHINGTON, DC-MD-VA | 18 | 10.5 |
| ST LOUIS, MO-IL | 13 | 8 |
| DALLAS-FORT WORTH | 11 | 5.2 |
| BATON ROUGE, LA | 11 | 5.1 |
| BOSTON-LAWRENCE-SALEM | 9 | 4.3 |
| CINCINNATI-HAMILTON | 9 | 2.1 |
| HUNTINGTON-ASHLAND, WV-KY-OH | 8 | 5.2 |
| CHARLOTTE-GASTONIA-ROCK HILL, NC-SC | 8 | 4 |
| CLEVELAND-AKRON-LORAIN | 7 | 2.2 |
| RICHMOND-PETERSBURG, VA | 5 | 3 |
| LOUISVILLE, KY-IN | 4 | 2 |
| INDIANAPOLIS, IN | 4 | 1.1 |
| PORTLAND-VANCOUVER | 2 | 1.2 |
| LEXINGTON-FAYETTE, KY | 2 | 1.1 |
| PHOENIX, AZ | 2 | 0 |

Sources:

Actual 1987 violation days: EPA AIRS database for 1987.
EPA Estimated Exceedances: EPA News Release, May 3, 1988.

## CITIES WITH MORE THAN 10 VIOLATION DAYS IN 1988
(Excludes California)

| | AREA NAME | No. Days 1988 | No. Days 1987 | 1986 POP. (million) |
|---|---|---|---|---|
| * | HOUSTON-GALVESTON-BRAZORIA | 54 | 54 | 3.63 |
| * | NEW YORK-NO. NEW JERS.-LONG ISLND | 42 | 32 | 17.97 |
| * | PHILADELPHIA-WILMINGTON-TRENTON | 42 | 31 | 5.83 |
| * | BALTIMORE, MD | 36 | 23 | 2.28 |
| * | WASHINGTON, DC-MD-VA | 31 | 18 | 3.56 |
| * | HARTFORD-NEW BRITAIN-MIDDLETOWN | 28 | 23 | 1.08 |
| * | CHICAGO-GARY-LAKE COUNTY | 27 | 15 | 8.12 |
| | CINCINNATI-HAMILTON | 27 | 9 | 1.69 |
| | BOSTON-LAWRENCE-SALEM | 26 | 9 | 3.71 |
| * | MILWAUKEE-RACINE | 22 | 14 | 1.55 |
| * | ATLANTA, GA | 20 | 24 | 2.56 |
| | PITTSBURGH-BEAVER VALLEY | 20 | 6 | 2.32 |
| * | ST LOUIS, MO-IL | 17 | 13 | 2.44 |
| | SPRINGFIELD, MA | 17 | 1 | 0.52 |
| * | SHEBOYGAN, WI | 16 | 13 | 0.1 |
| | LOUISVILLE, KY-IN | 16 | 4 | 0.96 |
| | DETROIT-ANN ARBOR | 16 | 3 | 4.6 |
| | PORTLAND, ME | 15 | 4 | 0.21 |
| | CHARLOTTE-GASTONIA-ROCK HILL, NC-SC | 14 | 8 | 1.07 |
| | HUNTINGTON-ASHLAND, WV-KY-OH | 14 | 8 | 0.33 |
| * | BATON ROUGE, LA | 13 | 11 | 0.55 |
| | CLEVELAND-AKRON-LORAIN | 13 | 7 | 1.85 |
| | NASHVILLE, TN | 13 | 3 | 0.93 |
| | MUSKEGON, MI | 12 | 8 | 0.16 |
| | RICHMOND-PETERSBURG, VA | 12 | 5 | 0.81 |
| | RALEIGH-DURHAM, NC | 12 | 4 | 0.65 |
| | ALLENTOWN-BETHLEHEM, PA-NJ | 12 | 3 | 0.66 |
| | PARKERSBURG-MARIETTA, WV-OH | 12 | 3 | 0.16 |
| | BIRMINGHAM, AL | 12 | 0 | 0.91 |
| | TOTAL | 611 | 356 | 71.21 |

* Indicates City With More Than 10 Violations in Both 1987 and 1988

NRDC

Natural Resources
Defense Council

1350 New York Ave., N.W.
Washington, DC 20005
202 783-7800

May 19, 1989

The Honorable William K. Reilly
Administrator
U.S. Environmental Protection Agency
12th Floor
401 M Street, S.W.
Washington, D.C. 20460

Dear Mr. Reilly:

The Natural Resources Defense Council has analyzed ozone air quality data for 1987 and 1988 and has compared that data with EPA's public announcements regarding exceedances of the ozone standard for those years. Based on our analysis NRDC has concluded that EPA's method for reporting these data seriously understates the actual frequency of exceedances of the ozone standard in most major metropolitan areas.

For example, in the Houston-Galveston, Texas metropolitan area in 1987, the ozone standard was exceeded on 54 days at one or more monitoring sites in the metropolitan area. However, EPA's published report for 1987 ozone exceedances lists the Houston-Galveston area as having only 20.8 expected exceedances for 1987. EPA May 3, 1988 Press Release on Ozone and Carbon Monoxide Attainment Areas.

The attached tables list other cities where EPA's method of reporting substantially underestimates the actual number of violations in the metropolitan area.

While EPA has released a preliminary report on 1988 ozone and carbon monoxide exceedances, we expect that EPA plans to release a more comprehensive report in the coming weeks. We urge you to modify the method EPA has previously used so that the public will receive more accurate information on the frequency of air pollution episodes in their communities.

The reason that EPA's current method understates the frequency of exceedances in a metropolitan area is that the Agency presents readings gathered from only a single monitor in the area. While this single monitor, the "design value" monitor, is useful for designing a program to attain air quality standards, it does not present a comprehensive picture of air pollution incidents in the area as a whole.

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A better measure of the actual frequency of air pollution in an area is to examine the complete network of monitoring sites for the area. NRDC has used this method in summarizing ozone exceedences for 1987 and 1988.

NRDC's analysis is based on computerized reports from EPA's AIRS air quality data system, known as "violation day reports." The "violation day" method produces a list of days for each metropolitan area when one or more monitors in the area registers an exceedance of the air quality standard. NRDC submits that this method, which uses data collected at all the monitors in the area, produces a truer picture of the area's pollution frequency.

While EPA will generate violation day reports for an area on specific request from the public (as was done for NRDC in this case), the Agency has not used this information in its annual reports on the nation's ozone and carbon monoxide exceedances. As a result, the public, the press and Congress may be under the impression that pollution events in their areas occur less frequently than is in fact the case.

Accordingly, we urge you to publicize the results from EPA's violation day reports for each metropolitan area in the Agency's next public announcement of ozone and carbon monoxide exceedances.

Please note that NRDC is not accusing EPA of having intentionally chosen a method that understates the frequency of air pollution events. It appears that the Agency has simply not compared its current single monitor method with the network-based approach that we have used. We are bringing this comparison to your attention with the hope that you will move to change EPA's reporting approach to one that includes all the monitors in each area.

Sincerely,

David G. Hawkins
Senior Attorney